



Health for a lifetime... Hope for eternity.





Health for a Lifetime

**Copyright © January 2008
by Orionwatcher Press
Printed in the United States
First Edition**

**For information or questions
about this material please contact
Neil Goodman at
Orionwatcher@Juno.com
231-796-7185**

Nothing written in this book should be viewed as a substitute for competent medical care. Also, you should not undertake any changes in diet or exercise patterns without first consulting your physician, especially if you are currently being treated for any risk factor related to heart disease, high blood pressure or diabetes.

Table of Contents

Acknowledgments	3
Foreword.	4
A Place of Safety	5
Introduction	7
Truth Detector.	9
The Big Picture	13
Twin Errors of the American Diet	19
The Missing Nutrient	26
Protein; Too Much of a Good Thing	37
Osteoporosis; Not enough Calcium?	45
Fat; Can it be Good for Us?	53
Our Sweet Tooth	62
Salt; Is it Losing its Favor?	67
Dietary Supplements; A Necessity?	72
God's Diet	82
The Addiction Carousel	87
Victory Over Cancer	103
Start New Dietary Principles.	115
Pharmaceuticals	119
The Perfect Storm.	127
Substitutions for Better Food Choices	130
Unfamiliar Ingredients	132
Herbs	138
Phytochemicals.	142
God's 8 Laws of Health.	145
Spiritual Nuggets	147
Vegan Food Pyramid	165
Recipes.	166
The Bible and Good Health	181
Questions & Answers	185
Advantages of the Two-Meal Plan	222
Scientific Proofs	223
Pantry Stocking.	240

Acknowledgments

For twenty years now, I have been groping for ways to help people, including myself, gain improved health and longevity. The word "groping" was specifically chosen because that is exactly how it has often felt. Finding the truth (amid a plethora of half-truths or worse), accepting and living it myself, finding receptive minds among patients and seminar participants, and searching for loving, effective ways to share the truth has been, and continues to be, very challenging. Thankfully, the merciful God has graciously and patiently provided, abundantly, in each of these areas.

Much of the material in this book has been borrowed from others who have come before me and have special talents that I do not possess. As a practicing family physician in a rural county of Michigan for almost two decades, it has been my privilege to care for patients with health care challenges spanning almost the entire gamut. The Lord has repeatedly brought to my attention the works of others who have put into words the very issues and problems upon which I was at that time contemplating. Often, He has highlighted particular paragraphs or entire works in my mind's eye, that I was led to appreciate as heaven-sent truths, standing out clearly as wheat among the chaff. Along this journey, I can say, without equivocation, He has never failed to free my mind of difficulty and perplexity. How can I thank Him enough?!

Back in 1996, we were first invited to give a series of presentations on a variety of health topics. Over the years, these discussions became more structured into a nutrition and healthful cooking series designed to prevent and cure our common diseases. Covering so much material (while always trying to be simple and succinct), we started to compile the

talks into a written form to be handed out for review. This ultimately has grown to the book now produced.

With deep appreciation, I want to list the many health experts who have had a profound impact on this project, past and present. As you read this material you will find many ideas borrowed from these wonderful communicators to whom I, my patients and my audiences are very thankful. In alphabetical order they include: John Abramson, M.D., Elvin Adams, M.D., Neal Barnard, M.D., T. Colin Campbell, PhD, Thomas M. Campbell, Robert Cohen, Brenda Davis, R.D., Hans Diehl, DrHSc, MPH, Joel Fuhrman, M.D., Vicki B. Griffin, PhD, Mervyn G. Hardinge, M.D., Dr.P.H., Ph.D., John Harvey Kellogg M.D., Aileen Ludington, M.D., Howard F. Lyman, Vesanto Melina M.S. R.D., John McDougall, M.D., Neil Nedley M.D., David C. Nieman, Dr.P.H., Dean Ornish, M.D., Frank A. Oski, M.D., John Robbins, Agatha M. Thrash, M.D., Calvin L. Thrash, M.D., and Mrs. Ellen White.

Further, I want to thank the many individuals who have worked with me, encouraged me and invited me to present these materials over the past dozen years. They are too numerous to mention but especially include George Corliss, Mike & Dotti Lambert, Mike Messer, Pat & Carol Perigard, Linda Shively, and Pastor Michael & Sharon Szykowski.

Finally, I want to thank my wonderful wife Chris and my three children Danielle, Drew, and Ethan...and apologize for being somewhere else in thought, even when I appeared to be right in front of them.

Neil Goodman D.O.
January 1, 2008

Foreword

God is desperate. Those three words are the sum of this material. They are the sum of the START NEW program of which this syllabus is part. God is desperate to be reunited with His children. He is desperate to again walk "in the cool of the day" with Adam and His beloved children. Nothing can fill the emptiness that He feels. God is desperate.

It will not be easy. The relationship with His beloved has been badly broken. It has been severed by thousands of years of lies and mistrust. How is God to rekindle love in a world where suffering and sorrow are everywhere; where the lies of the adversary regarding the character of God are so universally believed? The thought permeates the minds of many; can an all-powerful, all-loving God be the caretaker of a world filled with so much disease, so much misery? The emptiness that God feels will not be filled without an eternal reunion with His beloved earthly children, yet they do not trust Him. His only hope is to rebuild that trust. It will not be easy.

"During His ministry, Jesus devoted more time to healing the sick than to preaching." This is how He would rekindle trust and reveal His character of love. "The Saviour made each work of healing an occasion for implanting divine principles in the mind and soul. **This was the purpose of His work.** He imparted earthly blessings, that He might incline the hearts of men to receive the gospel of His grace."

This work He continues today. Through START NEW, His eight laws of health, God desires to rebuild this broken relationship. One beloved friend at a time. As ailments are healed, the mind is inclined to consider anew the Saviour's love. Step by step, with unspeakable gentleness and patience, He works today to rebuild in each of us a relationship of trust that will last for eternity. As we experience His healing touch today, we are inclined to trust His promises for tomorrow; we are inclined to embrace, tears mingling, never to part. God is desperate for this intimacy with each of us!

*...true science will be called upon
to highlight the health message of
the Bible...*

This is the work of START NEW. Tradition, theory and speculation will not be our guide rather, page by page, true science will be called upon to highlight the health message of the Bible, a message designed to heal our suffering and restore our faith; a message designed to reveal God's all-loving and all-powerful character. May God bless our study together and may each of us experience the fulfillment of His promise, "Beloved, I wish above all things that thou mayest prosper, and be in health, even as thy soul prospereth. 3 John 2.

As we stay within the circle of God's protection He promises us abundant health. Psalm 34:7

Place of Safety

However, as we leave this place of safety we will experience the apparent need of worldly healing provisions.

START NEW

God's Eight Laws of Health

Our Love offering
Romans 12:1

Sunshine

Nutrition

Temperance

Exercise

Air

Trust in God

Water

God's Promise

Protect us from all disease
Exodus 15:26

Danger Area

Meat

Cheese

Medications

Animal

Milk

Nutritional
Supplements

Snacking

Surgery

Processed Foods

Hi-tech

Modern Medicine

God's Way

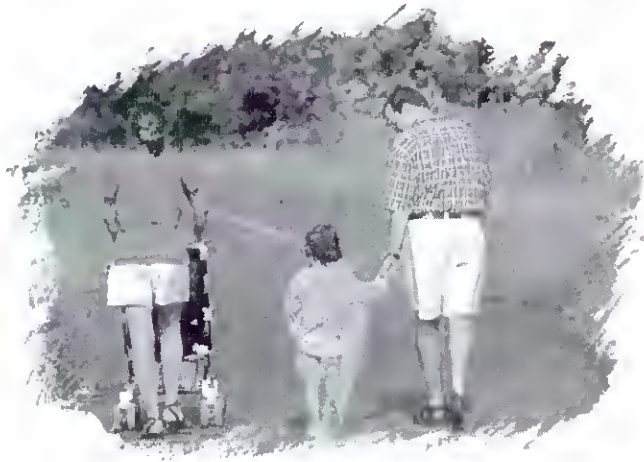
The Adversary's Way

Those who persist in the use of tea, coffee, and flesh meats will *feel the need of drugs*, but *many* might recover without one grain of medicine if they would obey the laws of health. Drugs need seldom be used. {Counsels on Health 261.2}

**Welcome to Health for a
Lifetime... Hope for Eternity 2008.**

We are very happy to be with you for the 13th year of this health program. It is our hope that each of us, during this seminar series, will experience great blessings of **practical**, **immediate**, as well as **eternal** significance. The challenge before us is to join together in the study of the laws of health and then apply these truths in our daily lives. By comparing our everyday experiences with scientific research and scriptural truths, it can be our privilege to greatly improve the health and longevity of our minds and bodies. Like each of you, we are looking forward to that!

As we move forward through this seminar discussion, we will be endeavoring to give health and disease its rightful place as heaven sent vehicles for understanding the spiritual principles of life. Yet, we would like to caution the reader that our understanding of both nature and God are indeed greatly limited (and especially so with this writer). "For now we see through a glass, darkly," (1 Corinthians 13:12). Thus



it will often prove beneficial for the reader to pause and reflect on the subjects presented and thereby gain greater understanding of thoughts so incompletely expressed.

*... isn't our health "predetermined"
by the genes we inherit from our
parents... ?*

As we venture forth, let's begin by saying that we are searching for truth. How many of us are **confident** we know the truth about health and disease? There are so many voices today, with different opinions, often contradicting each other. Indeed, many are tempted to give up the search in the face of all this confusion. After all, isn't our health "**predetermined**" by the genes we inherit from our parents anyways?

It is with joy that we state most emphatically that the truth about health is both **simple** and **very near**. Indeed, in light of how easily diabetes, heart disease, high blood pressure and virtually all other causes of suffering can be cured, we wonder if there has ever been a generation so blessed as ours. On this note of excitement, let's begin by laying out some foundational thoughts on our journey onward toward the best of health and well-being.

Introduction

Without doubt, all of us have suffered the distress of illness. We have also suffered, with others, during their afflictions. These experiences lead us to ask and consider carefully some important questions:

- "Why is there so much suffering and illness in the human family?"
- "Is illness and suffering the inevitable result of getting old?"
- "Many suffer from debilitating diseases such as arthritis, diabetes, heart disease, high blood pressure, or cancer. Should we expect the same fate?"
- "How can we believe in a loving God in light of the vast suffering and illness throughout the world?"
- "Should faith in God result in a healthier and longer life?"
- "Or must we wait until heaven to experience robust physical and mental health?"
- "Why do religious people suffer the same diseases (and in the same frequencies) as non-religious people?"
- "Does this fact make God more or less attractive to an unbelieving, skeptical world?"
- "Does diet and health have anything to do with religion?"

Might it be that the answer to all these questions and mankind's universal problem of sickness is imbedded within this last question? As someone whose background is as a scientist and a skeptic, I was amazed to discover that, contrary to popular belief, diet and health have a great deal to do with religion. How does one come to such a conclusion? Let's consider a few introductory thoughts:

From 3 John 2, we read, "***Beloved, I wish above all things that thou mayest prosper and be in health, even as thy soul prospereth.***"

Here we learn of God's will for our lives. This is amazing. Many believe that God wants to give us heaven. However, here, He says that our physical well-being is of *equal*

importance to Him as is salvation itself. He said, "even (***or just as***) I want your soul to prosper, I want you to prosper and be in health."

So, this is His goal; to save us for eternity ***and*** to make us healthier here and now. Would it be fair to suggest that it is easier to believe He can and will do the former (provide eternal life), if He does the latter (improve our current health and well-being)? Has not many a skeptic challenged God with this very idea? That is, why have faith in the God who promises future blessings, but can not make my present better!

Does diet and health have anything to do with religion?

Notice the words of 1 Corinthians 10:31:

"Whether therefore ye eat, or drink, or whatsoever ye do, do all to the glory of God."

This verse implies that there is a way to eat and drink that brings glory to God. What is that way? Is it knowable? Will scientific knowledge agree with this way? Could this verse teach us why so many, even among those sincere at heart, miss out on the health promised in 3 John 2? Not that we fail to desire what is best and what honors God, but that we simply do not know what is best!

As we move through the next eight weeks, our minds will be brought back

to the simplicity of this scripture and an understanding of how we can eat and drink to the glory of God and thus allow Him to bestow upon us His will (3 John 2) for our lives.

The famous Greek physician Hippocrates said, "We are what we eat." This is the good news. We are not adrift on the hopeless, disabled ship of fate. The worldly philosophy that says, "it's in my genes" or "my time is up" is not true! Indeed, the wise man in Ecclesiastes 7:17 (TLB) agrees totally with Hippocrates when he says, "Why should you die before your time?" Yes, there is abounding hope for victory!

Our Challenge

One day Abraham Lincoln came back from a church service. His secretary inquired of him, "Mr. President, how did you like the service?" He responded, "I didn't care for it." She asked him, "Why not?" He replied, "Because the minister didn't ask me to do anything!"

Every step of this program will present a challenge. We will be asked to do something;

"... be ye doers of the word, and not hearers only, deceiving your own selves." James 1:22

We will be asked to change our direction; to turn from a destructive path and follow the narrow way that leads to the best life, even eternal life.



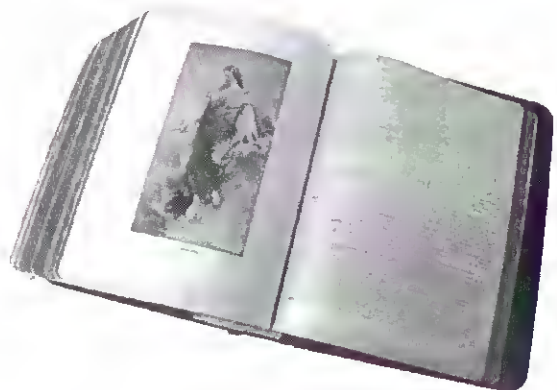
Truth Detector

While we are here with you and as we study together, we want to promise you that it is our every intention to speak honestly. We have **nothing** to sell and we do not desire any gain, monetary or otherwise. It is simply our hope that this program will help to fortify each of us in body, mind, and soul.

To this end, we will be seeking to direct the discussion towards thoughts and ideas, which are in harmony with the seven rules seen below. Please consider the following principles for the detection or determination of what is truth:

1. **Truth is available to everyone from the beginning of time.** Long ago, the wisest of all men Solomon reminded us of the vanity of human wisdom; "there is no new thing under the sun" (Ecclesiastes 1:9).
2. **Truth is available to the poorest among us.** No amount of money can procure the spiritual and physical health that heaven seeks to freely give to "whosoever will" (Revelation 22:17).
3. **Truth preserves our freedom of choice.** Those things that bind or enslave us come not from the Lord, but from His and our adversary (John 8:32, 36).
4. **Truth is easily understood by all classes.** The same gospel (truth) can save men and women of varied educational backgrounds. Indeed, it makes the simple wise (Psalm 19:7).
5. **True science and the Bible always agree.** If they do not, then our science must be in error and we are only safe with a plain "Thus saith the Lord" (Proverbs 3:5).
6. **Truth will be in harmony with the Scriptures.** As the Bible states in Isaiah 8:20, all ideas and thoughts must be tested by the Word and be in 100% harmony.
7. **Truth will direct us to God as our Creator and our Great Physician** (Revelation 4:11).

Like the **Ten Commandments** of the Bible (Exodus 20) and the **Eight Laws of Health** (page 145, 146), these **seven rules of truth detection** reveal the true character of God. Working to undue the Adversary's objective, which is to blind our eyes to the loving character of God (2 Corinthians 4:4), they help us to form a right image of His personality and moment by moment be changed into that same image. All creation seeks to teach us of God's love and as we study health and disease ***we should ever keep our minds open to the great spiritual truths being taught about God.***



Caution

As we proceed, let us keep in mind the concept of good, better, and best. This is vital to understand, because **despair** will be lurking around every corner seeking to discourage us. The health and dietary reform we are after is a **progressive experience**. It is true there are some immediate changes, we will want to make in our lives. Yet, much of the time, with God's guidance and power, we will be progressing one step at a time; that is, from wrong to

good and then better and finally unto the best way.

Further, let's take heart as we venture forward on this journey for there is unbelievable power for change available to us. Consider for instance the simple observation that people eat what they like, and like what they eat! Can we like what is best? In most cases, all we have to do is eat it!

Keynote Statement

"In today's world, we can do more for our own health than any doctor, hospital, or technological advance. The scientific data confirms that the choices we make, hour by hour, day by day, largely determine the state of our health, the diseases we get, and often even when we will die. The challenge is to replace health-destructive habits with health-enhancing lifestyles.

The volume of health information flowing through the media is overwhelming, confusing, and often contradictory. Today's breakthroughs often become tomorrow's big busts. We long for common sense information that is reliable, understandable, and scientifically sound.

In this program, we will explore the **causes** and **reversibility** of our most common ailments by simple, yet profound, lifestyle changes that will impart to us a renewed sense of self-control and self-worth. We can, in most cases, Eat more

and lose weight naturally and permanently while cutting our food budget in half; Beat high blood pressure, diabetes and high cholesterol without drugs; And reduce our risk of heart disease and cancer by 80%. It's not the 'Good Life' our culture idolizes, but rather it's the 'Best Life'!"

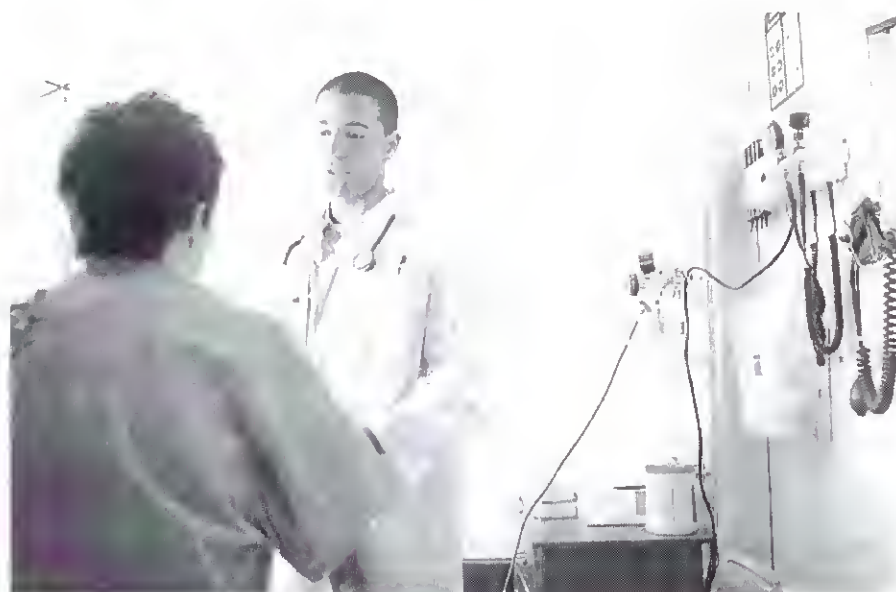


Lifestyle (or Chronic) Diseases

The 'common' ailments that so burden our society can be grouped under the banner called lifestyle (or chronic) diseases. This is an appropriate term because indeed they are ***primarily the result of the way we live***. More specifically the way we eat. Further, and amazingly, they are largely unheard of in 80% of the world!

Below we can see a partial list of these common, yet, usually unnecessary afflictions:

Arthritis	Dementia	Pancreatitis	Gout
Rheumatism	Ulcers	Obesity	Allergies
Diabetes	Gastritis	Heart Disease	Eczema
Hypertension	Headaches	Osteoporosis	Psoriasis
Stroke	Tendonitis	Hemorrhoids	Cancer
Constipation	Kidney Stones	Appendicitis	Anxiety
Diverticulosis	Crohn's Disease	High Cholesterol	Depression
Cholecystitis	Multiple Sclerosis	Varicose Veins	Fibromyalgia
Back Pain	Ulcerative Colitis	Kidney Failure	Chronic Fatigue
Cataracts	Chronic Pain	Impotence	Syndrome
Heartburn	Fatigue	Insomnia	



Again, while common in our country, they are in most cases, neither the inevitable result of getting older, nor the necessary consequence of 'bad genes' that we have inherited from our parents.

Program Goal

As we begin this program, let's be clear about our greatest desire. As previously mentioned, it is never our intention to be misleading. The fact is, by virtue of our personal experiences and a large amount of scientific research, we know that ***the large majority of participants in this program will, in changing their lifestyles, be adding many quality years to their lives.***

The increased lifespan, improved quality of life, as well as the dramatic reduction in chronic diseases are indeed wonderful by-products for those who practice these lifestyle habits. Yet, increased vigor, vitality, and joy, as great as they are, are not the ultimate goals. No, the ultimate goal of this program is beyond even these wonderful possibilities.

The fact is, no matter how many years we add to our lives by living right; no matter how much our quality of life improves, it will never come anywhere near the quantity or quality of life that our Lord is eager to give to us, if we will surrender our lives to Him and do things His way.

"... Eye hath not seen, nor ear heard, neither have entered into the heart of man, the things which God hath prepared for them that love him."

1 Corinthians 2:9

Let us put it another way. This program will almost assuredly make everyone that implements its teachings happier, stronger, better looking, sharper of mind, and add years of prosperous living. Yet all that, if that is all that is gained, will, rest assured, ***ultimately be found to be unsatisfying.*** The best that this world has to offer is in reality, not worthy to be compared with the wonderful heavenly future He has prepared for us.

Research shows that a healthy lifestyle can hold back the aging process as much as 30 years.

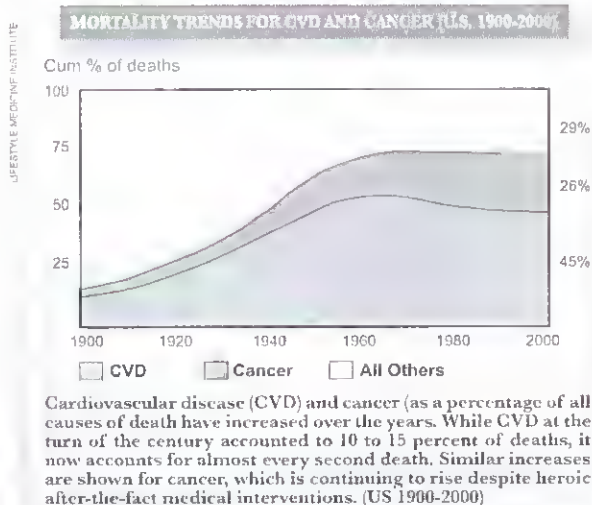
Indeed, during the next few meetings, we are going to learn things that will amaze us. Things that can be learned few other places, which, if acted upon, will almost immediately improve our quality of life. Yet, our ***primary goal*** is not an improved quality of life, as confident as we are that this will be the result. Rather, it is our hope and prayer that we all will see, in these truths, the Master Designer; the One who created our wonderful bodies ***to live forever*** after His own image; the One who loves each and every one of us and has given everything that He could that He might spend ***forever*** with each one of us.

The Big Picture

God is desperate for us to know the truth about Him!

Food is not the same as it was some one hundred and fifty years ago. Before the 20th century, the American diet consisted mainly of food grown in local gardens or nearby farms. This was supplemented with a few staples from the general store and some meat from range fed cattle.

Our diet has changed dramatically! Hot whole grain cereals like oatmeal; have been replaced at the breakfast table by cold presweetened flakes. Lunch typically consists of a hamburger, french fries slobbered with ketchup, and a soda. Supper now often comes delivered in a cardboard box, and between meals, there are ding-dongs, chips and donuts.



As our diet has changed dramatically, so too have our diseases. Diseases such

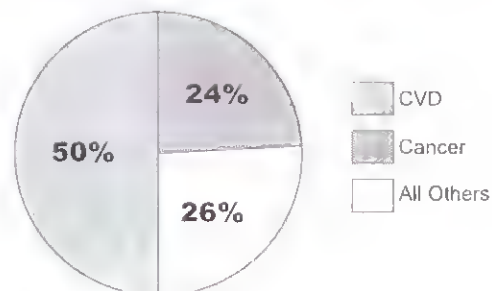
as heart disease, high blood pressure, diabetes, and cancer of the colon, breast, prostate, and lungs emerged largely after World War 1. And they have mushroomed in prevalence ever since.

Could their emergence be related to the revolution in our food supply?

For many years now the American people have worked hard to achieve the 'good life'. And now that we have the 'good life', we are beginning to wonder if it is really that good after all?

If it is all that good, why are we spending millions of dollars for books, pills, and innumerable gimmicks to help us lose weight and yet we are getting bigger every year?

If the good life is really that good why is it that three out of four people are dying from heart disease, stroke, and cancer; diseases that cannot be found in 80% of the world's population? The figures above and to the right reflect the causes of death in % of all deaths. Sadly, about three of every four deaths in the U.S. are caused by cardiovascular disease (CVD) and cancer!



If the good life is really that good why is it that every second person over 40 years of age is suffering from high blood pressure? While in 80% of the world's population blood pressure problems are rarely found.

If the good life is really that good why is it that a new diabetic is discovered every minute in America (about 1.5 *million* new diabetics added last year alone)?

Now these problems are very common in Western society. But we should not conclude that they are natural. It is not natural to die from a heart attack. It is not natural to die from a stroke. It is not natural to develop colon cancer, breast cancer, prostate cancer or lung cancer. These are basically western diseases. It is not natural to die from these diseases or have the disabilities associated with these diseases.

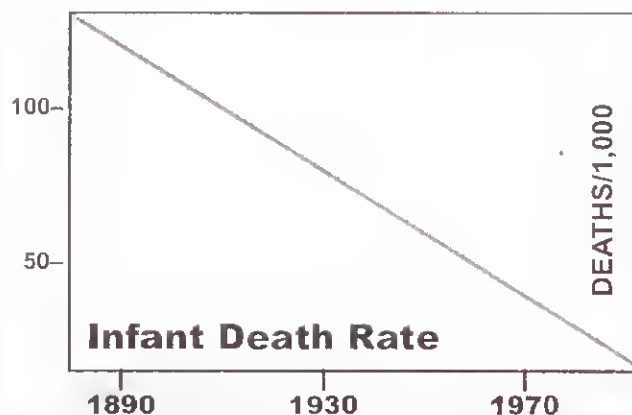
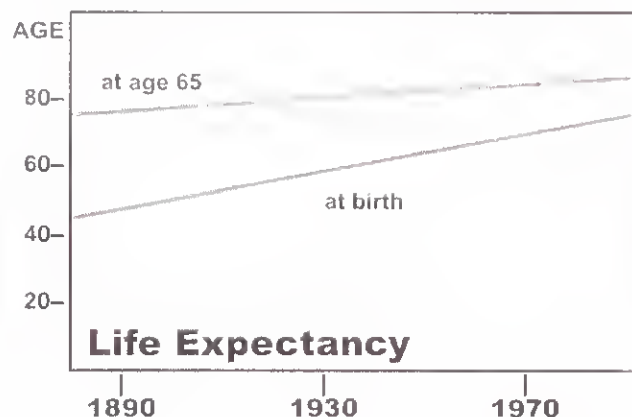
Now as we begin thinking this thing through one of the first thoughts that comes to our minds is the belief that we live about thirty years longer than people did back 100 and 200 years ago. "Well, if we live longer, are we not destined to develop some of these diseases? After all, you have to die of something, someday, don't you?"

Well, the truth is that we really are not living thirty years longer. Although this is widely accepted as truth, it is not really accurate. When we look more carefully at the statistics, we begin to realize the only reason it appears that we live thirty years longer is because we

have dramatically reduced our childhood mortality in this century. A century ago, every sixth child died before reaching the age of one. Today, because of better sanitation (cleaner water), and better maternal and child health care, primarily public health initiatives, the infant mortality rate in our country has been greatly reduced.

The truth is that a person, who survived childhood in the nineteenth century, had a life expectancy far greater than the forty-two years expected for them at birth.

U.S. LIFESPAN TRENDS



Life expectancy at birth is increasing. Life expectancy for 65-year-olds, however, has only marginally increased during the past 100 years.

Many of our great grandparents lived into their seventies, eighties, and even nineties and they died from a disease not seen very often in our day and that is old age. They lived full lives and then just passed into the sleep of death quietly one night. We, however, no longer really die; instead, we just slowly fade off the scene. Our sense of well being, energy and strength progressively failing, and we find ourselves dying slowly, day by day.

Many scientists are suggesting that the deaths occurring from heart disease, cancer and strokes really only emerged after World War I in America and Europe. And they have

further suggested that it has been due to the changing lifestyle in western society; particularly, how we eat, drink and smoke.

Consider that after World War I, both smoking and drinking became more affordable. Then with the development of food advertising and marketing, we became sold on new, technologically, prepared foods. With the advent of these food technologies in the twenties and thirties, we began to see the appearance of never before seen food

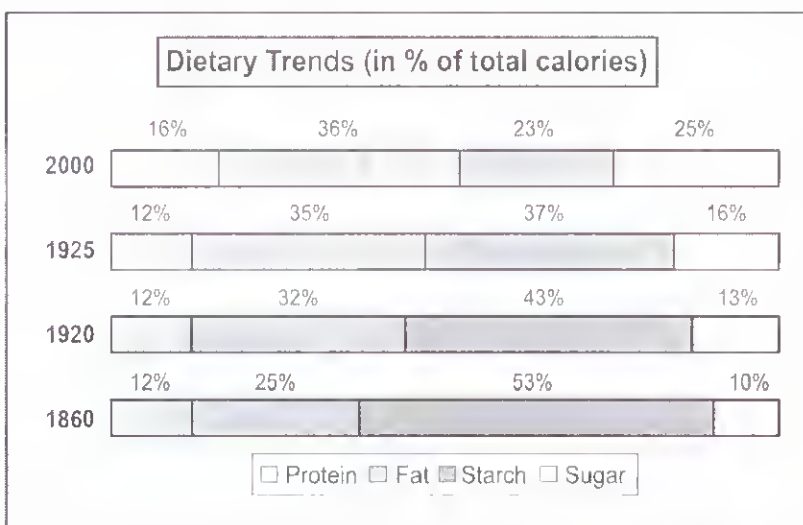
products. Thus, today, when we go to a supermarket, there are literally 30,000 food items screaming at us to buy them: foods that did not exist as recently as 75 years ago.

The change in the American diet since the nineteenth century has been nothing less than profound, because the large majority of these new technologically produced foods are loaded with sugar and fat. In America, we consume forty percent

of our calories in the form of fats, grease and oil. At the same time, we are consuming an enormous amount of sugar. In fact, twenty percent of all the calories that we eat come from sugar. That means about

thirty-five teaspoons of sugar per day.

As we look at the changes in the American diet, we realize that over the past 140 years the fat consumption has increased by about 50% and the sugar consumption has gone up by 250%. While at the same time the complex carbohydrates (the starches) have been dramatically reduced. We no longer eat the commodity foods, and if we do eat them, we usually eat them refined (adjusted by us).



The standard American diet (SAD) has been shifting, resulting in a dramatic change in its composition. Today more calories come from sugar (simple carbohydrates) than from starch (complex carbohydrates) and more than one third of the calories come from fat.

Additionally, our diet has become more and more animal product based; that is, more meat, sausages, cheeses, eggs and poultry. While all these have been consumed for much of human history, the world has never seen anything near our current levels of consumption. Furthermore, because livestock were raised on ranges rather than in feed lots, as they are today, the meat of our great grandparents was usually very lean.

And so science is beginning to suggest that the diseases that have emerged in epidemic proportions after World War I are not just coming out of a blue sky. Rather they are the result of how we have chosen to live.

"The diet of the American people is becoming increasingly rich in meat and other sources of saturated fat and cholesterol; and this diet, which affluent people generally consume everywhere is associated with

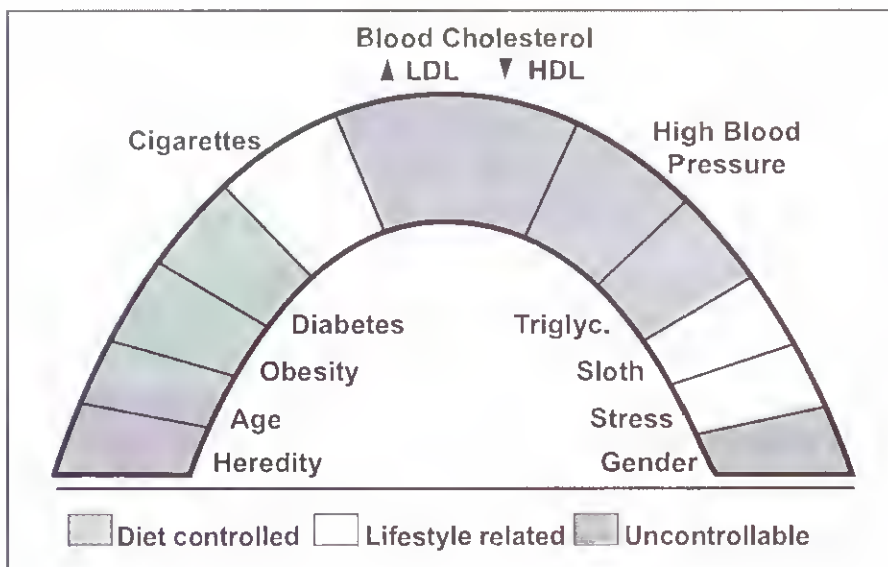
similar disease patterns; namely high rates of heart disease, certain types of adult cancers, diabetes, and obesity--our major killers."

Dr. Mark Hegsted
Harvard University
U.S. Senate Hearings. 1977

The truth is that the way we choose to live largely determines our level of health and longevity. We have much more control over our quality and quantity of life than we realize. While it is true that our heredity is a factor in almost all facets of life, it is also true, at the same time, that our lifestyle choices have much more impact than our genes. That is good news!

Notice this illustrated in the diagram to the right. Those factors that are changeable are also those that are most important.

Isn't that consistent with what we know about the fairness and goodness of the Lord?



The higher on the arch, the higher the contribution of the risk factor to heart disease. Five of the eight controllable risk factors are largely under the control of diet.

Consider these thoughts, also, in light of the worldwide research highlighted below. The first two graphs reveal the direct linear relationship between fat consumption and the rates of death from Breast and Prostate Cancer. While the third graph, reveals the same linear relationship between the amount of salt intake and the level of blood pressure found in the populations of various countries.

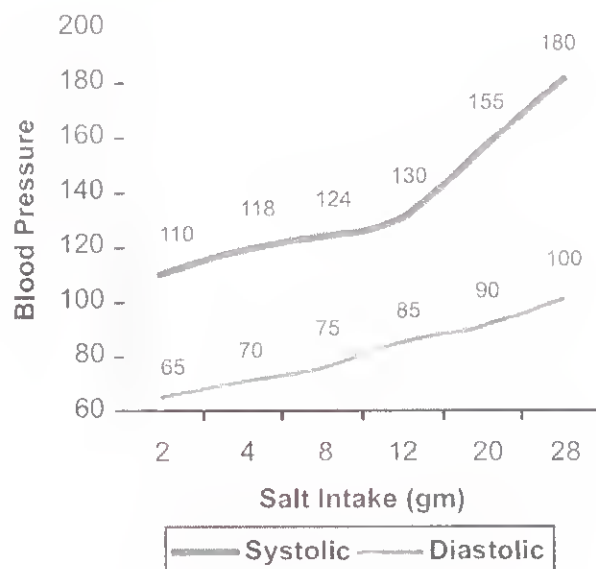
It is incredible to realize that we need only know the rate of fat or salt intake in a country to accurately predict how many of its citizens will suffer from these diseases.

Now we have been led to believe in the idea that as long as we have a good medical care system every thing will be fine. However, we are beginning to realize that that is not true. Even our most advanced medical care system in the world, at a cost of sixteen percent of every dollar we spend every year, often has very little hope to offer us in the face of these lifestyle diseases.

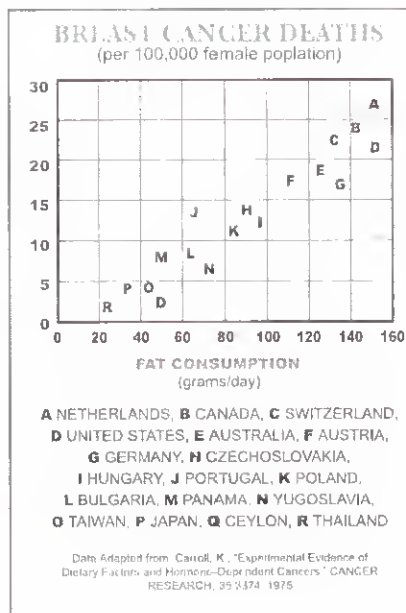
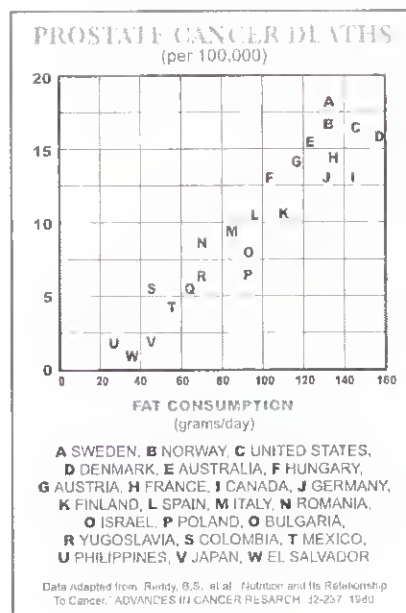
Consider for instance, this famous and sobering quote:

"Medications do not really cure disease. While it is

Blood Pressure & Salt in 27 Human Populations



true that they sometimes afford present relief and we appear to recover as the result of their use; this is only because our bodies have sufficient resources to correct the conditions that caused the disease. Health is usually recovered in spite of the medication! In most cases, actually, the medication **only changes the form and location of the disease.**" (see Q & A on page 180, 1813).



Finally, consider the picture (to the right) of water running from a faucet, overflowing the basin beneath and flooding the floor. We have two, highly trained, dedicated, and motivated gentlemen, with “A grades” all the way through college and medical school down on their hands and knees. Their sole purpose in life is keeping the floor dry, so they spend sixteen hours a day mopping. They have no time for their wives. They never see their families; because they are too busy mopping.

Now, the water running from the faucet represents the cause of disease. The flood on the floor symbolizes the diseases filling our hospital beds, doctor’s waiting rooms and the operating rooms. Sadly, ninety-nine and two-thirds percent of all the money we spend on medicine and health in North America goes for mopping floors—curative medicine. Only one-third of one percent

goes toward turning off faucets—preventive medicine. The truth is it is far better to prevent disease than to know how to treat it. Surely, we ought to be spending more time and money turning off faucets!

The bottom line is that we need to exchange the ‘good life’ for the ‘best life’; where we maintain all our strength and mental abilities our whole lives. And, in so doing, witness for others with an example of vitality and peace not often seen in our generation.

The health presentations during these meetings will seek to empower each of us to dramatically improve our quality and quantity of life with a few simple lifestyle changes. We will speak practically of how the American diet promotes disease and how a change, a simplification of our diet, can prevent and even reverse our most common ailments.

TREATING THE SYMPTOMS



Twin Errors of the American Diet

Correcting these two errors will allow us to eat more food than we have ever eaten before of the right kind. These changes will save us 40% of our food dollar. They will dramatically improve our sense of well being and diminish significantly our chances of getting any of the so-called lifestyle or chronic diseases. What a deal!

Principle #1: Eat More Unrefined Foods

We noted above that when we consider the energy or calories contained within our food, we consider the amount of carbohydrates; those are the starches and the sugars (also called the complex carbohydrates or simple carbohydrates). We also consider the amount of fat and protein. Food derives its energy from these three categories.

Right here we want to learn a lesson. Every gram (a unit) of fat contains 9 calories and every gram of starch (carbohydrate) contains 4 calories. Which one do we want to eat to lose weight? Obviously, we want to choose the one that has fewer calories per gram.

Food Refinement Concentrate Calories

Let us illustrate a few examples of food refinement starting with a beautiful and delicious apple that contains all of seventy-five calories. However, that is not quite good enough for us. So what do we do?

We turn the apple into an apple pie. We add white sugar, white flour, and shortening, and suddenly our home is filled with a wonderful aroma and we can hardly wait for dessert to be served. Of course, we are still not done improvising, are we? It seems almost naked, doesn't it? So we add the ala mode! Just one slice of apple pie ala mode and we go from seventy-five calories (the apple) to 600 calories.

But wait! We had a tough day, didn't we? Maybe we ought to reward ourselves with a

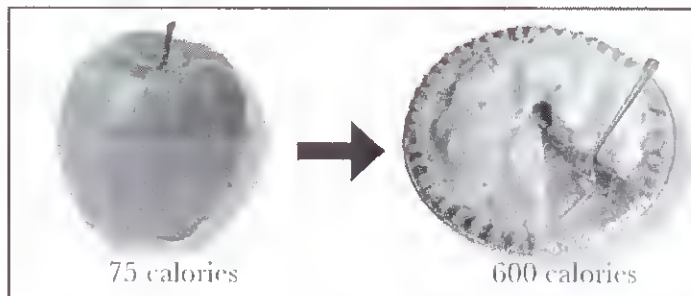
second slice. After all, there is no point in letting the apple pie go to waste, or even worse, spoil in the refrigerator. Bring on that second slice and do not forget the ice cream.

Two slices of apple pie ala mode for a total cost of 1200 calories. Just think how many apples we could have eaten for 1200 calories! The answer is sixteen, in case anyone is wondering.

Refinement concentrates calories, but it does not change the volume in our favor. While the food volume diminishes, the calorie load goes up.

Now, we might be asking; what causes

us to feel full? Do we feel full when we've had a certain volume of food or when we've had a certain amount of calories? Hmm?



Okay, now let us take a potato with all of eighty calories. Just the way God packaged it. We put it into the oven and when it comes out, what do we do? Many of us, with reckless abandon, proceed to practice medicine without a license! Yes, what happens next is truly offensive. A knife is used to make a surgical cut right down the middle and then that perfectly innocent potato becomes an accomplice to a crime. A caloric cemetery is created with all kinds of calories buried right in the middle.


What do we put into it? The sad list includes butter, sour cream, cheese, bacon and who knows what else. From eighty calories, we make a caloric bomb of 500 calories.

Moreover, the unspoken thought is, "I've just improved on God's design."

Oh, but there is more! This same innocent potato is turned into French fries or hash browns. And

worst of all, we take the equivalent of one and a half potatoes (eight ounces), about 140 calories, and we buy them in the form of Pringles.

What are Pringles? They are very thin potato chips (just enough potato to hold all the fat together); everyone guaranteed to be unbroken. However, instead of paying 20 cents for the 1 1/2 potatoes, we are now paying \$1.69. Instead of having 140 calories we have now devoured 1360 calories. We go from 140 calories to ten times that number. In addition, we go from 20 cents, God's design, to man's design, an engineered food, which now costs us \$1.69.

		Calories
	with Sour Cream & Butter	420
	Hashbrowns	520
	French Fries	530
	Potato Chips	1,200
	"Pringles"	1,360
140 calories (8 oz.)		

Wonder Bread???

Next, let us look at bread. It is supposed to be the very backbone of our diet. But then came 'wonder bread.' What is that? Well, it is a white bread with some very interesting features. If it is squeezed, just a little bit, it sort of disappears. It is appropriately named, for we are apt to 'wonder' where it is.

Okay, so we take that slice of bread and the first thing we realize is that we cannot do a thing with it. So we first put it in the toaster to stabilize it. But now we realize that it is too dry. We don't like it that way so we have to put some butter or margarine on it. What have we done? We have added about 200 empty calories with no nutritional value; just calories in order to make it moist. Of course we are not done. For next, we put on top the peanut butter. We have created the All-American special. But wait; now it sticks to our palate. So, we put some jam on top of all the rest so as to grease the chute. Out of that one slice of white bread, with eighty calories, we have created another caloric bomb coming in at over 400 calories.

If we eat foods as grown, rather than these artificial, technologically produced foods, we often have to eat ten times the volume to get the same number of calories.

The question to ask ourselves when choosing food is which is more satisfying? Which is more filling? If we want to lose weight, which is a better way to go? The answer is that we want to eat foods with more volume per calorie. The truth is that we want to eat more food to feel satisfied. Yet, we can see how we will actually be eating far fewer calories!

However, if we have the apple pie, the potato chips, or the white bread sandwich we will still feel hungry. Why? Because it hardly fills us up. Therefore, we end up right back at the refrigerator again. On top of that, we feel guilty!

Let us do one more example of how we can eat large amounts of food and better understand this concept of concentration of calories through refinement.

Can We Improve on God's Design? Wasn't that Satan's Problem?

How about a delicious Sara Lee Carrot Cake. When we look at it, we can hardly wait to get our teeth into it. Actually, they have done research, and learned that the average person can eat half of a Sara Lee Carrot Cake in 3 minutes. Probably some of us here are above average.

Now a Sara Lee's Carrot Cake has 1100 calories and about 50% of the calories are from fat. It even contains a few carrots!

However, what if we wanted to eat the calories of a Sara Lee's Carrot Cake in terms of carrots? Well, we would have to eat a lot of carrots. In fact, we would need 3 1/2 good size bowls of carrots to get the equivalent of the calories in just half of the carrot cake.

The problem is becoming very easy to see, is it not? By food refinement, or the engineering of food, we take God's original package and then we modify it; we engineer it; we make a chemical concoction, which is sold at big profits with a clever marketing packaging.

Do we realize today, that the packaging is created and test marketed before the 'food' is even created?

We no longer can afford to 'feel full' because Sara Lee's Carrot Cake is very concentrated in calories. It has a small amount of volume and a large amount of calories. How about God's design? It has large volume, with plenty of fiber. We can 'feel full' and yet have eaten a relatively small number of calories.

Oh the Calories! 50% of the American diet is empty calories.

#1. Sugar accounts for about 21% of all the calories that we eat on the average in America. That equals about thirty-five teaspoons of sugar per person per day. And we say, "I do not eat that much sugar!" Wait a minute. Let us look at the facts.

One coke has twelve teaspoons of sugar. One donut has seven teaspoons of sugar. One slice of German chocolate cake has fifteen teaspoons of sugar. One banana split has twenty-five teaspoons of sugar.

The truth that we need to be aware of is that sugar is very well hidden in the foods that we eat everyday. Too often, we do not realize this truth.

It is surprising to many that Shake & Bake is 51% sugar. Jello is 83% sugar. Honey smacks is 52% sugar. Most pre-sweetened cereals are around 50% sugar. We are paying a lot of money for sugar, when we suppose that we are getting wheat or corn.

Adding insult to injury, sugar has no nutritional value, only calories.

#2. We have the visible fats and the oils; that is the mayonnaise, the butter, and the toppings, which account for about 20% of our calories. Again, these are empty calories. When we eat pringles or french fries they really have very little in common with the innocent potato with which we started. These are just delivery systems of fat and oil with a little bit of starch to hold them together.

Yes, our diet has been modified, almost totally engineered. Another interesting

fact for us to keep in mind is that, the less valuable a 'food' is on a nutritional basis, the more dollars are spent on marketing to sell it!

#3. Finally, we have alcohol, which accounts for about 9% of the calories that American men consume. Again, zero nutritional value.

So we add these up and come up with

Empty Calories	As % of total cal.
Sugar	21%
Visible fats and oils	20%
Alcohol	9%
Total Empty Calories	50%

the fact that, 50% of all the calories that we eat are empty calories, devoid of nutritional value. Too often these days our food is loaded with calories and has no fiber, no vitamins, and no minerals.

In many ways, Americans are actually undernourished. While at the same time, they are consuming more calories than almost any population in the world. Yes, we are overfed and undernourished. But the answer is not to take vitamin pills. Rather it is to change our diet from a refined diet, full of processed man made 'foods', to a more natural diet created for us by our loving God.

Principle #1: Eat More Unrefined Foods, Simply Prepared

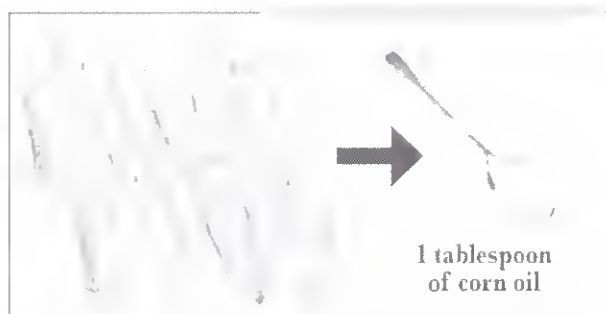
If we do so, we can eat lots of food without having to worry about calories. After all, how many potatoes can we possibly eat in one session? It is interesting to note that it takes fourteen ears of corn to make one

tablespoon of corn oil. We all can easily eat the equivalent of one tablespoon of corn oil in the form of mayonnaise. But, if we did not have a technological system to extract the oil for us, probably none of us could.

Can any of us eat fourteen ears of corn in one session?

Food technology enables us to concentrate calories while modifying and reducing the volume of food.

Furthermore, it is not the number of calories consumed that signals our brain that it is time to stop eating! No, this occurs rather, when the stomach capacity is



reached. Incidentally, the average stomach holds about 4 cups of food.

Principle #2: Reduce Animal Products

If we want to be healthy and weigh the right amount, we have to recognize that much of the fats, outside of the visible fats (the oils), are very well hidden. For instance, it is little appreciated that dairy products and meats are high-energy foods. Sirloin steak is 82% fat in terms of total calories. When we go to Wendy's and buy one of those triple cheeseburgers we are getting 1060 calories and 60% fat, and that is not including the fries and pop.

Few notice that cheese is usually 70-80% fat in terms of total calories, or that whole milk is 50% fat. Clever marketing has sought to convince Americans that whole milk is 4% fat, when in reality it is fully one-half fat and it contains primarily the artery clogging saturated fat.

Notice, to the right, the amount of fat in our most popular foods. Keep in mind that the diet associated with living past a hundred years with vigor and a clear mind contains about 15-20% fat.

The foods in the left hand column

WHOLE MILK FAT CONTENT

Whole milk (2 glasses) = 3.7% fat by weight

Total Calories 300

Grams of fat 16.8

Calories of fat (16.8 gm fat x 9 cal/gm)... 150

150 of the 300 calories in milk come from fat.

Whole milk = 50% fat by calories

Fat in Foods (% of Calories)

Milk	50%	Fruits	1-5%
Ice Cream	55%	Grains	5-15%
Cheese	60-85%	Legumes	5-10%
Cream Cheese	90%	Vegetables	1-5%
Butter	100%	Nuts	75-90%
Pork	65-95%	Olives	90%
Beef	65-85%	Avocados	90%
Chicken	15-40%	Soybeans	40-50%
Turkey	15-40%	Tubers	1-10%
Fish	15-40%		
Choc. Candy	50%		

contain mostly saturated fat which leads to poor blood circulation and those in the right hand column contain mostly the health promoting mono and poly unsaturated fats. In a later meeting, we will explore this in

detail, including why nuts, etc., with all that fat, are actually good for us.

The bottom line is we can eat lots of potatoes; lots of carrots; and lots of fruit and never go hungry. If we want to be successful in weight management and our other health goals then we have to eat more foods of the right kind. Foods that fill us up, provide plenty of nutrients, and allow us to push away from the table satisfied and full of

praise for our magnificent Lord.

As we eat foods as they come in nature, with simple preparation, we will discover not only relief from our many ailments but also a renewed sense of well being. Best of all, we will meet our heavenly Father at our dining table and truly be able to thank Him for the many blessings of His provision.

Conclusion

What are some of the factors that contribute to disease and premature death? The most important deterrents of health are blood cholesterol, smoking, high blood pressure, diabetes, obesity, and stress.

The first five are all under the control of diet. Further, scientific research has proven, that they can be dramatically changed, often, in as little as thirty days.

Cholesterol can be reduced by 15-20% in that amount of time. This simultaneously reduces the risk of heart disease by 50%.

High blood pressure, a prime cause of heart disease and stroke, can in most cases, be eliminated in four weeks with a few basic lifestyle changes.

Over 50% of insulin dependent adult diabetics can be off their insulin in four weeks if they are willing to break with their western diet.

We can indeed eat more and lose weight without gimmicks and the weight loss will be permanent.

We are talking about a change in our lifestyle, not simply a fad diet.

"The concept that western diseases are lifestyle related and therefore potentially preventable and reversible is the most important medical discovery of the 20th century."

Dr. Denis Burkitt

We can turn it on and we can turn it off. We now understand why we have these diseases in our society and yet rarely find them in 80% of the world's populations? We now understand why these Western diseases disappeared after World War II in Europe, and then returned with a vengeance a few short years later as the people returned to their Western 'affluent' diet?

The answer to our health crisis is to eat a simple diet; primarily foods as grown, as they are found in nature; and as they have come from the Creator's hands.

Practical Spiritual Nugget

“If any man will do his will, he shall know of the doctrine, whether it be of God, or whether I speak of myself.”

John 7:17

A prerequisite to receiving light is that the seeker for truth must be willing to follow in the light that is revealed.

An answer to the confusion of today is to be found in doing what was learned yesterday.



The Missing Nutrient

Today, we want to introduce the most significant nutritional mistake of the last one hundred and fifty years. Unwittingly, nutritional scientists, no doubt prompted by Satan, encouraged this single modification of our food, and in so doing, dramatically increased our rate of both disease and premature death.

This change involves a substance that has no caloric value; no vitamins, no minerals; in fact, it is neither digested nor absorbed. Additionally, when you remove it from food, the food has a lighter texture and a longer shelf life.

For these reasons nutritional scientists, back in the 19th century (keep in mind, this was before the refrigerator), decided that this substance was unnecessary in the American diet. They concluded that, "obviously 'nature' or God made a mistake!"

This is a classic example of misguided pride of intellect! God described Satan's problem in like terms. "...thou hast corrupted thy wisdom by reason of thy brightness" (Ezekiel 28:17). Indeed, all who **choose not to trust God** are ultimately doomed to **the same mistake** (2 Thessalonians 2:10-12).

What is the name of this 'worthless' substance? Its name is fiber. Nutritional science decided that since fiber had no apparent nutritional value and shortened the shelf life of food it would be in our best interest to remove it during the processing of food.

The outcome of this single change has

The Missing Nutrient

**No Calories
No Vitamins
No Minerals
Not Digested
Not Absorbed
Without it food has a:
lighter texture
longer shelf life**

been a disaster of gigantic proportion to our health and longevity. Today, fiber deficient diseases are the most common causes of premature death and illness in Western society.

The lack of fiber is probably the major cause of colon and breast cancer (second and third most common causes of cancer death), heart disease, diabetes along with a host of other non-life threatening diseases.

The reality is a **high fiber diet** can in the majority:

<u>Prevent</u>	<u>Cure</u>
Diverticulitis	Constipation
Appendicitis	Hemorrhoids
Cholecystitis	Diabetes
Colon Cancer	Obesity
Breast Cancer	High Cholesterol
Heart Disease	Atherosclerosis

For many years, nutritionists poorly understood fiber's health promoting properties. What they did know was that fiber had no calories. They assumed, therefore, that it did not make one fat or skinny. They also knew that it had no vitamins or minerals, and was in fact all waste matter that never left the digestive tract. With this understanding, they presumed it to be an unnecessary component of our diet.

Fiber Analysis

Crude fiber analysis was the initial method used to determine the amount of fiber in our food. To determine the quantity of crude fiber, food was exposed, first to a hot acid mixture, and then to a hot alkali mixture. The amount of crude fiber contained in the particular food tested was then said to be the amount of material that survived this two pronged assault.

Sadly, since our digestive systems do not create such a severe environment, food tested in this manner resulted in a very serious underestimation of the indigestible (fiber) content of our food. Simply stated, hot acid and hot alkali break down more of our food than does our own digestive system. Therefore, this method of 'crude fiber' analysis significantly underestimated the amount of fiber in our food.

In the late 70's, a more accurate method of determining the amount of fiber was developed and it was appropriately named 'dietary fiber' analysis. Scientists realized that humans and animals had different digestive systems and therefore the amount of fiber in a particular food was dependent on who was eating it. This led to the realization that if they wanted to know how much fiber was in our food they had to expose it to our stomach and intestinal

Q & A Box

Q: What is fiber?
A: The parts of plants *not* digested.

Q: How is the fiber content of food estimated?
A: Originally called "Crude" fiber, which is defined as the quantity of food left after exposure to hot acid and alkali substances.

Q: Why has this been discarded?
A: It significantly underestimated the actual amount of fiber.

Q: What is the new method?
A: Called dietary fiber, which is defined as the quantity of food left after exposure to human digestive acids and enzymes.

Q: How accurate is this method?
A: A very accurate measurement for us of the fiber content of foods.

juices. So they exposed food to human digestive acids, alkalis and enzymes and then measured the amount of material left over. This finally gave us an accurate measurement of the amount of fiber in our food.

Types of Fiber

Fiber is the parts of plants not digested. They are mostly complex carbohydrates similar to starches and there are several families of them.

One family is called cellulose and hemicellulose: these are the cell walls of plants. Out of cellulose, we make cardboard boxes, paper, cellophane, saw dust, etc. Incidentally, cows can digest cellulose because they have the digestive enzymes that allow them to do that.

Then there are pectins: these are very jelly-like in consistency. Pectins are used to make jams and jellies. They are found in fruits like apples, peaches, and bananas. We often do not think of pectins as fiber, but they are in truth very poorly digested; that is,

they go right on through us.

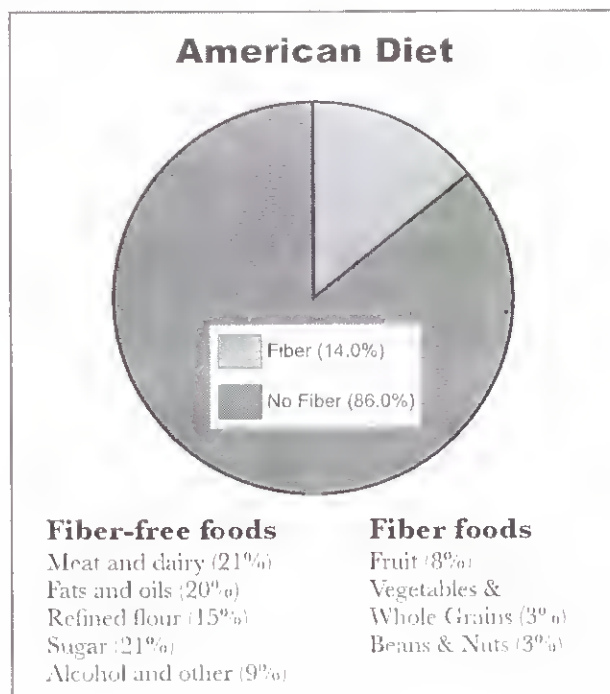
Then there are other families of fiber compounds like lignin's, gums, guar's, and mucilage's (glue). In the United States, food producers have lately been adding quite a bit of gums and guar's to our food products. Many low calorie foods, like salad dressings, have these additives, so they will pour out thick and creamy, rather than like water. This has caused, lately, a small increase in the fiber intake for the average American.

While crude fiber analysis was fairly good at measuring cellulose and hemicellulose, it was not good at measuring pectins, lignins, gums, guar's, and mucilages. All together, these substances make up what is on the food nutrition label as dietary fiber.

Fiber and the American Diet

Let us take a look at where fiber is in the American diet. It turns out that 86% of the American diet is relatively fiber-free; that is to say, it has very little or essentially no fiber. As illustrated at the figure on the right, this 86% is made up of meat and dairy (21%), fats and oils (20%), refined flour (15%), sugar (21%), and alcohol and other (9%).

Amazingly, only 14% of the American diet is composed of fiber rich foods. That 14% is broken down between fruit (8%), vegetables and whole grains (3%), and beans and nuts (3%). Clearly, the average American diet is rather sad, especially when it comes to fiber content.



Fiber and Digestion

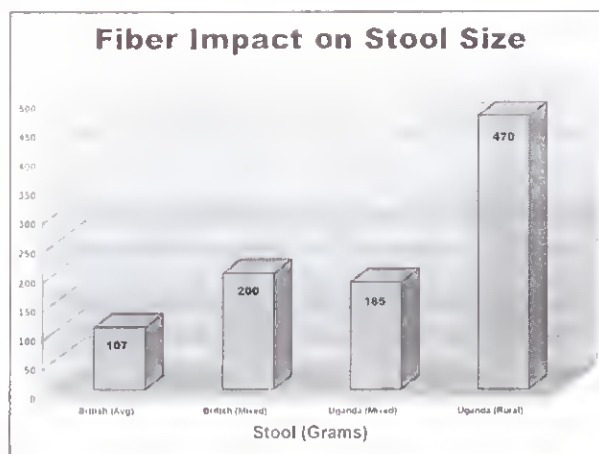
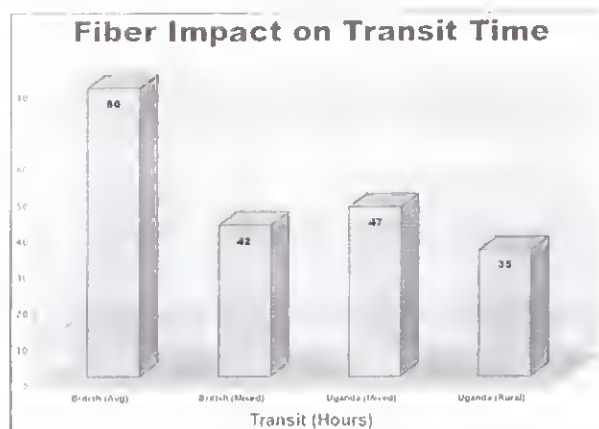
Now let us look at the effect of fiber on transit time through our GI tract; that is, the amount of time it takes our food to go from the beginning to the end.

Dr. Denis Burkitt, one of the most famous physicians of the 20th century, spent many years practicing missionary medicine. By these experiences, he became a well renowned expert in fiber related diseases. We want to look at one of his most interesting studies in which he compared his English countrymen with the people from the African country of Uganda. It should be kept in mind that the average British person has a highly refined diet very similar to our own.

His study revealed that the amount of time it took for an average British person's food to pass through their digestive system was 80 hours, with the average weight of the English stool being 107 grams. Next, he looked at someone in England who was liberalizing their diet with added amounts of fiber-rich food (he called this a mixed diet). He found that this change cut down their transit time to 42 hours and the weight of the stool doubled up to 200 grams.

Then he went to Uganda, the site of his missionary work, where there was less access to refined foods. In the major cities, he found the people actually had a mixed diet with some British crumpets and the like in their daily fare (Uganda was a British colony). The city folk were found to have a transit time of 47 hours and an average stool weight of 185 grams.

Finally, he went into the bush, where people ate food much the way they found it (whole grains, nuts, roots, berries, etc. with



essentially no meat). Here he discovered something very interesting. This group was found to have a transit time all the way down to 35 hours, with an average stool weighing in at 470 grams.

Now those large soft stools are important and those small puny British stools are the same ones that give us a whole lot of trouble.

Dietary fiber has several beneficial effects on the human body:

1. It increases the water content of our digestive system.
2. It increases the transit time through the digestive system causing food to pass through us more rapidly.

3. It greatly diminishes the quantity of bacteria in our digestive system. This has a significant impact in the prevention of colon cancer.
4. It dramatically affects digestion and absorption of our food.

We have seen that fiber has a direct relationship on the transit time. In a few

moments, we will discuss in detail how a fast transit time greatly reduces our risk of colon cancer. We should be mindful that colon cancer is the #2 cancer killer in men and the #3 cancer killer in women. So we are talking about a major cancer in the United States and a fast transit time dramatically reduces our risk of colon cancer.

Fiber, Bile, and Cholesterol

Let us go to medical school, spend a few minutes discussing a compound called bile, and develop its interesting relationship with fiber.

Bile is made in the liver and its main purpose is to help us to emulsify (break up) the fats in our food so they can be absorbed. Bile is 82% water, 14% bile salts, 3% lecithin, and about 1% free cholesterol. This soupy mixture, we call bile, not only has free cholesterol but each bile salt also has cholesterol within it.

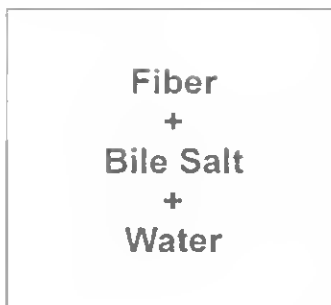
As we see illustrated on the right, there is a cholesterol molecule inside each bile salt, which makes it dissolvable (attracted to) in both water and fat at the same time. This unique property of bile salts allows them to perform this necessary function.

A bottle of salad dressing illustrates how this digestive process works. If we mix up a bottle of oil and water salad dressing, we are familiar with what happens given a few minutes. The different liquids separate with the oil on top and the water on the bottom. However, if we add some bile salts and then shake it up again, these two



liquids never separate. This is because the intermediary molecule (the bile salt) allows the oil and water to be together.

Why is it important to understand these facts? Well, one of the nicest things about fiber is that it likes water. That is how it causes a larger and heavier stool. We talked about those Ugandan stools that weighed 470 grams. They weigh more than the 107-gram British stools not because there was more fiber in them but rather because there was a whole lot more water in them.



Now if we have bile salts that on one side likes water. What is going to happen? Well, the same water

that is attached to bile salts is also going to be attached to fiber. So we now have a fiber, bile salt, water combination and a very interesting thing happens.

Ordinarily, 95% of bile acids are reabsorbed in the small intestine. So our liver makes the bile salts and sends it to the gallbladder. Then when we eat a meal, bile, including this bile salt, is sent into the small

intestine to help the body properly absorb fats. Its work done, it is also absorbed and taken back to the liver by the blood stream. In the course of one day,

our liver will reuse this same bile salt many times. In fact, our liver excretes 24 grams of bile salts every day but we only have about 3 grams at any one time. That means that each bile salt makes about eight round trips per day (in the average American).

Now let us throw fiber into this equation. Remember fiber is neither digested nor absorbed; it rather goes right out in our stool. Further, we remember that fiber is loaded with water. When the bile salts come along having finished their job, they unwittingly hook onto the water that is attached to the fiber.

Now where is that bile salt going to go? It is ready to be reabsorbed and returned to the liver but it has a problem. Not being able to let go of the water it is forced to follow the fiber all the way out of the body. So with a high fiber meal we will lose almost all of the bile salts utilized. They simply are carried

along with the fiber out of our body.

This causes a problem for the liver, which is expecting to be able to reuse the same bile salts. The liver knows we need those bile salts to make eight round trips per day. However, when the bile salts do not come back our liver is forced to remake bile salts from scratch.

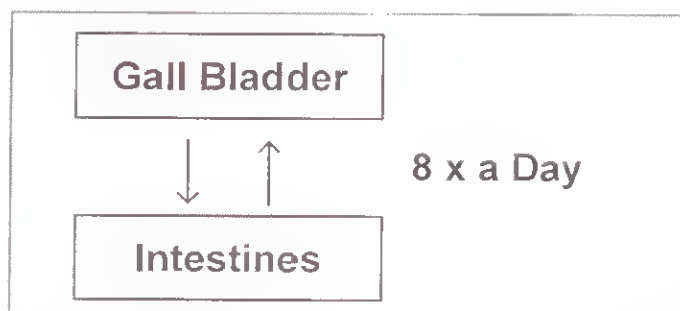
Now do we remember the molecule

at the heart of the bile salt? Why it is cholesterol! Therefore, our liver has to obtain new cholesterol. Where is it going to look for this substance? Our

liver discovers a bountiful supply in our blood stream and uses them to make the new bile salts.

What are we saying then? The most effective way to lower our cholesterol is to have a high fiber diet. This is because the high fiber diet causes the bile salts with their cholesterol to be readily lost in our stool. Therefore, if we eat fiber all the time our blood cholesterol goes lower and lower and pretty soon our blood stream needs to get some cholesterol from the artery walls. Then, our arteries start healing, with the plaques that are causing the blockages dissolving and our circulation improves. This in turn causes us to begin to feel and think better.

What a marvelous story especially with the dietitians telling us, for most of the 20th century, that fiber was of no value, because it had no calories, vitamins, or minerals.



Fiber and Detoxification

Let us take a look at some of the other elements that are responsible for fibers impact on the frequency of colon cancer. Then we will put this all together at the end.

As it turns out, we have all kinds of old hormones and other chemicals that should ordinarily be bound to a compound known as glucaronic acid. Glucaronic acid is a marvelous compound that our liver hooks onto anything that it does not like. If we have a poison in our bloodstream, our liver will take it out and hook a glucaronic acid onto it. Then it is dumped into the digestive system where it goes out of the body in our stool. If we have left over hormones, that our body does not need, the liver hooks a glucaronic acid to them and out they go. Old bile salts, themselves, are often hooked up to glucaronic acid.

Now, if we have a fast transit time everything is carried out just fine. However, it turns out that glucaronic acid is like ice cream and cake to bacteria. The bacteria in our colon love glucaronic acid. So if the stool sits in the colon for a very long time the bacteria say, "well, let's see what we can have for dessert here." They find the glucaronic acid, attached to all of these poisons, all of these old hormones, all of these waste products and they start having lunch. In a few hours, they eat up most of the glucaronic acid, liberating these poisons. This exposure over time is the primary cause of cancer of the colon. We see that it is good to have a fast transit time because then we can

get that stuff through our colon before those bacteria have a chance to work on it.

People who have colon cancer have been found to have a whole lot more of these old hormones, toxins, and waste products sitting in their intestines. If on the other hand, we have a high fiber diet, we then will have very few of these things floating around "free" in our intestines. Most of them will be bound up real tight and thus not able to irritate the colon or be reabsorbed into the blood stream and irritate other parts of the body.

How about the carcinogens (cancer causing compounds) that we meet through our food? (Notice in the figure to the right the quantity of the carcinogen benzopyrene in a charcoal-broiled steak as compared to its quantity in cigarettes). Does fiber aid in their elimination as well?

First, there are the nitrites; these are used to preserve meats. In the digestive tract, they can be changed to nitrosamines, which can cause cancer of the colon.

We have the polycyclic aromatic

A DANGEROUS CARCINOGEN IN CHARCOAL-BROILED MEAT

Benzopyrene in 2 lb. charcoal-broiled steak } = { Benzopyrene in smoke from 600 cigarettes



hydrocarbons in our diet; these come from charcoal broiling and smoked foods. We have the methylcholanthrenes; which are produced by overheating animal fats, such as with broiling. Then we have mycotoxins, which come from molds. Finally, there are aflatoxins and pesticides.

Now these are dangerous chemicals

we get from our foods. They can cause cancer of the colon if they are allowed to remain in the colon for an extended period of time. Another benefit to having a high fiber diet is that the larger, bulkier stools dilute these carcinogens. This is in addition to the benefit of the fast transit time and the diminished exposure to these poisons.

Conclusion

In summarizing, let us review all of the good things that a high fiber diet will do for us.

A high fiber diet, with its faster transit time and larger soft stools, will likely cure any problems with constipation.

If we do not have constipation and we are not straining, then we will be unlikely to develop hemorrhoids. The increased pressure produced by straining causes this vascular defect.

Beneficial Effects of a High Fiber Diet

- Cures Constipation
- Cures Hemorrhoids
- Prevents Diverticulitis
- Prevents Appendicitis
- Prevents Cholecystitis
- Prevents Colon & Breast Cancer
- Lowers High Cholesterol
- Cures Cardiovascular Disease
- Cures Diabetes
- Cures Obesity
- Prevents Kidney Stones
- Prevents Varicose Veins

What other disease is caused by having high pressures in the colon? When we have a small amount of material in our colon, higher pressures are required, and this leads to a disease called diverticulosis. While this is an extremely common disease in this country after the age of fifty, it is virtually unknown in countries where a high fiber diet is the norm.

A high fiber diet will help us to avoid diverticulosis, and it will also reduce our risk of developing appendicitis.

As yet, we have not said anything about gallstones. We did mention that bile is 80% water and 14% bile acids and these bile acids are supposed to make eight round trips per day in the average sick American. However, if our liver is having to scramble around to make new bile salts, to replace the ones lost with the stool, then how concentrated do we think that bile is going to be? The fact is the liver is going to make some watered down bile. There are not going to be as many bile salts in the bile soup. If we have watered down bile, we can not form gallstones. Gallstones only come about because of supersaturated bile that has too many bile salts crammed into it. High fiber diet people rarely get gallstones!

We talked about cancer of the colon and this disease indeed has several causes. But the most common one, are the liberated toxins setting up residence in our colons. We know that people on a high fiber diet have much less cancer of the colon.

Disease Equation

Low Fiber Diet
+ High Cholesterol
= Atherosclerosis
+ 20-60 years
= Heart Attack

Food	Cholesterol	Fiber
Plant	()	+
Animal	+	()

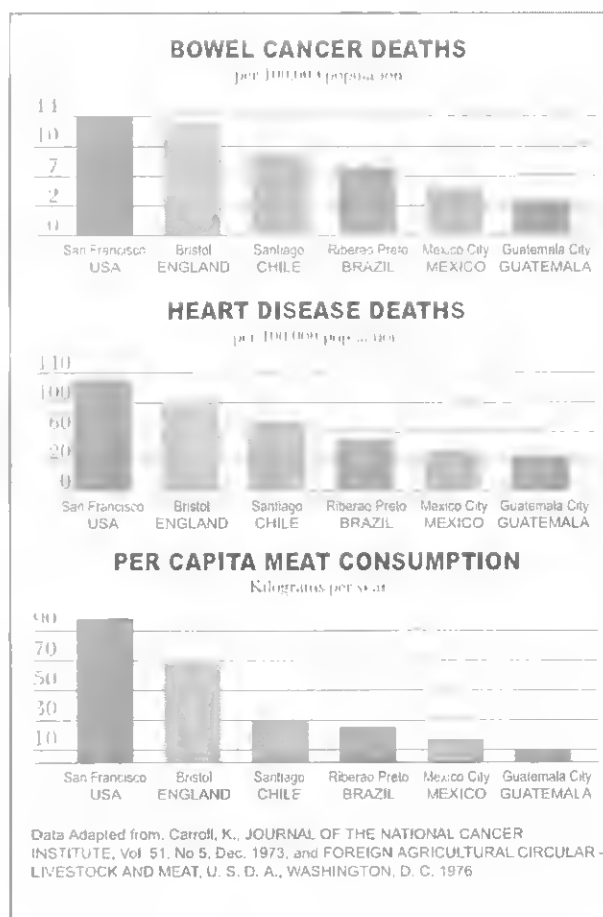
Interestingly, it turns out that whatever is true for cancer of the colon is also true for cancer of the breast. In every country that has low cancer of the colon, we also find low cancer of the breast. Conversely, high cancer of the colon is found with high cancer of the breast. Probably the most significant reason for this phenomenon is the same old hormones and toxins that cause colon cancer.

We know that breast cancer is often hormone sensitive. Those old hormones that were supposed to be eliminated through the digestive system are being unhooked in the colon by the bacteria and then re-absorbed into the body where they can influence breast tissue. Thus, cancer of the breast is also significantly related to the amount of fiber in our diet.

We have already mentioned that in order to remake bile salts, our liver has

to scour around the blood stream for cholesterol. This activity causes lower blood cholesterol, which causes less atherosclerosis (hardening of the arteries), which means fewer heart attacks and strokes. Notice, in the figure to the right, the difference in cholesterol and fiber in the two types of food sources.

Then the figure below illustrates the relationship between meat intake and bowel cancer and heart disease deaths in six different large cities. It should be kept in mind that meat has absolutely no fiber and so this relationship may have as much to do with the amount of fiber in the diet as with any deleterious agent in meat.



These last few are very interesting. We know that a high fiber diet is very favorable for diabetes. People that have diabetes and switch to a high fiber diet very often can cut their need for insulin dramatically and diminish their dependence on diabetic pills.

Though fiber speeds up transit time through the intestine and colon, fiber actually delays gastric emptying (the speed with which our food passes through our stomach). This has a couple of beneficial effects. If our stomach empties slowly, we will not feel hungry again as soon. We will be able to go longer between meals without feeling hungry. Of course, this really helps if we are trying to lose weight. Additionally, if we have sugar in our stomachs, the slower transit time is going to cause it to be absorbed more slowly. This will limit the height of our blood sugar levels and will limit the amount of insulin that our body needs to produce. For these reasons, a high fiber diet often cures diabetics.

Fiber also is a means by which the body eliminates excess minerals, such as calcium, so people with a high fiber diet will reduce their risk for kidney stones.







Finally, a high fiber diet is a very nice way of fighting obesity. Because high fiber foods have fewer calories per volume, we can stuff ourselves full and yet have eaten relatively fewer calories. Then also because of the delayed stomach emptying we feel fuller longer, which decreases our impulse to snack between meals.

Is it not amazing, that we could have a substance in our food, which nutritionists could label as being worthless, but which has such a dramatic impact on this long list of health problems?!

Fiber helps with the most common causes of illness in our country (heart disease, cancer and strokes). If we adopt a high fiber diet, we would go a long way towards dramatically reducing these all too common ailments!

COMMON SOURCES OF FIBER

Serving is 1 cup or 1 piece unless indicated otherwise

<i>Foods</i>	<i>Fiber (g)</i>	<i>Foods</i>	<i>Fiber (g)</i>
Whole wheat bread	2.1	Cauliflower 	1.5
Bagel, whole wheat	1.3	Brussels	5.2
Pita bread, whole wheat	6.3	Peas	6.7
Popcorn, air	5.2	Brussels sprouts	7.0
Oatmeal 	1.1	Sweet potato, without skin	7.7
Spaghetti, whole wheat	1.5	Lentils	10.3
Shredded wheat, biscuits	2.2	Pinto beans 	12.0
Granola	6.6	Navy beans	15.4
Apple, with skin 	2.8	Eggs 	0.0
Orange, fresh	3.1	Meat	0.0
Blackberries, raw	7.3	Milk	0.0
Pears, canned	7.7	Cheese	0.0
Raspberries 	11.0		

Final Thoughts

What are the foods that are rich in fiber?

High

Peas
Beans, Lentils
Nuts (some)

Medium

Fruit
Whole Grains
Potatoes

Low

Vegetables (most)

Spiritual Nugget

How can we have peace and happiness? As a physician, I frequently have the opportunity to counsel those struggling with this question. As with all of life's questions, it is best that we look to our Lord and His Word for the answer. Notice His counsel in John 13:17. ***"If ye know these things, happy are ye if ye do them."***

Now what is interesting here is that we naturally tend to do the opposite of the counsel found in this text. Let's explain. In this passage what comes first? Well, ***knowing*** does. Okay, what comes next? In our text, ***happy*** comes second and ***doing*** comes third. But the way the text reads ***doing*** comes second and ***happiness*** comes third. "...happy are ye ***if*** ye do them."

How do we change the way we feel? How do we change our emotions? ***By changing our actions.*** The text literally says, "If we know truth and do it, we will end up being happy." But that is not our natural response in life. Rather, we say "if we know something and we are happy about it, then we will do it." But that is neither what the Bible says, nor the way to gain happiness. We do not change emotions by zeroing in on the emotion. We change emotions by looking at the action.

In this passage is the secret for true lifelong happiness. Here, God is really saying, "if we learn His ways and we do them, He will give us happiness." This is

very important to our overall health because what goes on in our heads has a profound impact on what is going on in our bodies. Notice the truth in Proverbs 17:22, which says that "a merry heart doeth good like a medicine."

Do we want a merry heart? Do we get a merry heart by zeroing in on merriment? By spending our time trying to feel good? By finding the most exciting place of entertainment? Is that the way we get a merry heart? No, a merry heart is obtained by doing that which is right. And as we do what is right, God says the emotion will follow. That is the way emotions are. They are reactions to actions.

Why do we so often struggle? John 13:17 seems to imply that we struggle because we are not doing what we know to be right. We are doing the wrong thing. Why do we do the wrong thing? It can be painful to consider this question, but wrong actions are often the result of pride, selfishness, etc. These being natural feelings, common to us all, we can see why there is much unhappiness in our world.

Have we found the very best medicine? Are we using the very best medicine? "If we know these things, happy are ye if ye do them." Let's rephrase this passage. "If we know these things, and do them, we will be happy. (Notice also Proverbs 29:18; Psalm 119:165).

The Besetment

As amazing as it may sound to us in the year 2007, there was a time, just a little over 100 years ago, when smoking was considered an acceptable treatment for breathing difficulties. Physicians and 'healers' of that day actually recommended its usage for coughing and shortness of breath. While there was a small group, even back in the 19th century, who was aware of the harmful effects of tobacco, it was not until the 1960s, that it was common knowledge that smoking was injurious to our health.

When we study our culture or any other, we find in every generation, beliefs held by the masses as true beyond question, yet, which in reality are fantastically untrue (in Hebrews 12:1, it is called the besetting sin). Many consider our 'enlightened' generation as immune from this phenomenon. However, in reality, our age, so full of pride in self-accomplishment

as it is, is experiencing a virtual explosion of mythology. These have led, in no small way, to this century's dramatic increase in chronic disease and premature death.

Today, we are going to uncover a few of these phenoms, in the area of diet and health. The truths, to be discussed, may well be common knowledge in ten to twenty years, but today only a small fringe (or minority) of scientists, doctors and Americans correctly understand these truths. In fact, these myths are so engraved into the American mindset that almost superhuman courage is required to believe these unpopular truths.

Warning*** Anyone who believes and dares to act upon the following truths may be inviting a bevy of raised eyebrows, curled lips and even worse!

Tobacco Notes

During World War II (1939-1945), American physicians endorsed sending soldiers tobacco, and cigarettes were included in the field ration kits of U.S. armed forces personnel until 1975.

What year did the Surgeon General proclaim tobacco as harmful to our health?

Not until 1964! That year a special report by the U.S. Surgeon General linked cigarette smoking with lung cancer, coronary artery disease, and other ailments.

Protein; Too Much of a Good Thing?

One of the main problems, which we initially have with the vegetarian diet, is protein. We get worried. Will we get enough protein?



Common Questions

1. If I decrease or eliminate meat and dairy products, will I get enough protein?
2. Isn't protein essential for good health? And the more the better?!
3. How much protein should I consume?
4. Doesn't meat, milk, and cheese have the most and the best kind of protein?
5. Is plant protein as good as animal protein?
6. Can children grow properly and be healthy without meat and milk?

Protein Nutrition

It is quite true that protein is essential in our diet. There are literally billions of protein molecules in our bodies. While protein nutrition is somewhat more complex than carbohydrate or fat nutrition, it is made a bit easier when we understand that proteins are composed of amino acids. Indeed, protein molecules are hundreds and thousands of amino acids in a chain similar to a necklace.

There are twenty-one different amino acids. Our body can only produce twelve of these amino acids; while the other nine must be found in our diet. We can not make these nine by ourselves. We call these nine 'essential' amino acids, as they must be present in our diet for us to maintain good health.

Sadly, in regard to protein nutrition, we have been victimized by nutritional science with what we might call 'Word Magic'. We use this term to describe the deceptive use of our language (usually intentional) to convey information that while having some truth to it, is at the same time, misleading and harmful.

Word Magic
Enriched Flour
Whole Wheat Bread
All Natural
Complete Protein

Marketing specialists, to affect our shopping habits, deceptively uses all the phrases seen to the right. While they technically have some truth to them, they are far from the whole truth.

Indeed, their use has far more to do with their ability to sell food products than with their



Amino Acids

Essential
Phenylalanine
Tryptophan
Histidine
Methionine
Lysine
Leucine
Isoleucine
Valine
Threonine

Non-Essential
Glycine
Alanine
Serine
*Homocysteine
Cysteine
Tyrosine
Arginine
Glutamic Acid
Aspartic Acid
Asparagine
Glutamine
Proline

accurate portrayal of the truth.

Calling those nine amino acids 'essential' is probably an accurate usage of this word because it is essential for them to be found in our diet. The problem comes in when we say, "the foods containing all nine of these amino acids are 'complete protein' foods."

Which are the 'complete protein'

foods? They are meat, fish, poultry, cheese, eggs and milk. These are the only foods that contain all nine of the amino acids, the ones our bodies can not otherwise produce. Therefore, many have concluded that these foods are necessary for us to keep in our diet.

Well, in this case, the word 'complete' has a little bit of word magic in it. Let us illustrate that with a story.

The Wealthy, Naive Young Man

There was a rich, but somewhat naive young man, who lived in the mountains of North Carolina. In these mountains, there are many nice hard wood forests. For this reason, if one wanted to go into the furniture business this was a wonderful place to do it. Therefore, this young man decided to invest his money by going into the furniture business.

He called his associates together and asked them, "What materials would be required to go into the furniture business?" They began, of course, with the lumber that would be necessary to make the frames, the tables and the chairs. He asked them, "Where can we get the lumber needed?" They told him, "We can obtain all the lumber we need from the lumber mill." He said, "That's great. What else do we need?"

"Well, we will need

a certain amount of metal. We will need screws, braces, springs, and bolts." "Okay," he said, "can we get these from the lumber mill too?" "No, we cannot get them from the lumber mill. We will have to order them from the foundry. However, they will custom make them anyway we want." "Well," he answered, "this is getting kind of complicated."

"Okay, will we need anything else?" "Well, we are going to need cloth to cover the furniture." "Can we get that from the lumber mill," he asked. "No, we cannot get the cloth from the lumber mill or the foundry. We have to get the cloth from the textile mills."

Well, by now our rich, naive young man is beginning to have second thoughts. "I don't know if I want to go into the furniture business, because it seems more complicated than I had anticipated." He told



his friends that he wanted it to be simpler. "I want you to find a single supplier from whom we can get all the materials that we need for building furniture. Please don't come back until you find it."

So his friends went out and came back in a few days with an answer for him. "Now, we do not know if you will be happy with the answer that we have found. But we have located a single supplier that will give us all the materials that we need." The rich young man was excited. "Great, who are they?" "Well, our single supplier is called Goodwill! We can buy used furniture from Goodwill and after we take it apart we will have all the wood, metal, and fabric that we need."

In this little story, we see that the Goodwill is the complete supplier of furniture materials. Moreover, all those other suppliers; like the foundry, the lumber mill, and the textile mill, they are all incomplete suppliers. Isn't that right?

Now we can think of other words to describe these sources of materials, can't we? What else could we call Goodwill other than complete? We could also call them the old, used, second hand or secondary supplier.

What else could we call the incomplete suppliers, like the Lumber mill that produces the wood? Well, could we not call it the new, primary, or first-class supplier? Would not that really be a more accurate description in this case?

Now let us transfer this parable to all the incomplete sources of protein like vegetables, fruits, nuts, and grains. Yes, it is true that they may be incomplete, but they are also new, primary and first hand. The

truth is that we are far better off getting our protein from a primary, first hand or new source rather than from an old, used or secondary source. Consider the source of the chicken's protein? From where does the cow get its protein? The truth is that in eating these foods, we really are getting it second hand.

A famous health expert once wrote that "those who eat flesh are but eating grains and vegetables at second hand; for the animal receives from these things the nutrition that produces growth. The life that was in the grains and vegetables passes into the eater. We receive it by eating the flesh of the animal. How much better to get it direct, by eating the food that God provided for our use!"

She went on to say that "flesh was never the best food; but its use is now doubly objectionable, since disease in animals is so rapidly increasing. Those who use flesh foods little know what they are eating. Often if they could see the animals

PERCENTAGE OF CALORIES AS PROTEIN

Vegetables		Legumes		Nuts & Seeds	
Spinach	49%	Tofu	43%	Peanuts	18%
Broccoli	47%	Lentils	29%	Sunflower	17%
Cauliflower	40%	Split peas	28%	Walnuts	13%
Mushrooms	38%	Kidney beans	26%	Almonds	12%
Parsley	34%	Navy beans	26%	Fruits	
Lettuce	34%	Chick peas	23%		
Green peas	30%	Grains		Lemon	16%
Zucchini	28%			Cantaloupe	9%
Green beans	26%	Rye	20%	Orange	8%
Cucumbers	24%	Wheat	17%	Grape	8%
Celery	21%	Oatmeal	16%	Peach	6%
Tomatoes	18%	Buckwheat	15%	Pear	5%
Onions	16%	Barley	11%	Banana	5%
Potatoes	11%	Brown Rice	8%	Source: USDA ¹³¹	

when living and know the quality of the meat they eat, they would turn from it with loathing. People are continually eating flesh that is filled with tuberculous and cancerous germs. Tuberculous, cancer, and other fatal diseases are thus communicated."

The scientists of our day have proven the accuracy of these statements as one disease after another has been shown to be transmitted to our bodies by the foods we eat.

We need to be a little wary of modern nutritional science. We do not want to have a complete protein in our diet as attractive as that may sound. Rather than having a complete protein, we would rather have a new or a primary protein. A little later, we

are going to discuss the many reasons why this is so.

Consider the figure to the right, which reveals that non-meat foods contain an abundant amount of protein. Further, it is also true that by combining any two vegetable sources (such as corn and beans or peanut butter and whole wheat bread) we have a 'complete' protein. ***The fact is that virtually any vegetarian meal that we could dream up will contain a complete protein as long as two or more primary foods are used.*** Yet, it is not even really necessary to get all the essential amino acids in one meal as our bodies will be happy if they are simply consumed at some time during the day.

Plant versus Animal Sources of Protein

Which source of protein truly provides a better "quality" protein? Scientists looked at the complete diet of three groups: meat-eating Americans, pure vegetarians (those who exclude all animal products from their diet), and lacto-ovo vegetarians (those who excluded all animal products except for dairy products and eggs). They compared the actual amount of each amino acid consumed by these groups from their whole diets with the ideal balance of amino acids needed by man. Amazingly, their study revealed that the best quality protein among the three was from the pure vegetarian diet.

The figure at the right summarizes their findings. They found that the mix of amino acids in the total vegetarian diet most closely resembled the mix in the World Health

Organization standard (Rose's Standard) and in human breast milk.

The message is simple. When looking at the entire diet, the pure vegetarian diet emerges as superior in protein quality. The non-vegetarian diet departs from both standards almost twice as far as the pure vegetarian diet.

TOTAL VEGETARIAN DIET PROVIDES THE BEST PROTEIN QUALITY

Type of diet	Percent variance from Rose's standard
pure-vegetarian	28%
non-vegetarian	48%
Percent variance from human breast milk	
pure-vegetarian	13%
non-vegetarian	22%

Recommended Daily Requirements

The next thing we are interested in knowing is; what is the recommended amount of protein that we need everyday? It is astonishing how scientists originally answered this question and how many people, even today, still believe the deception.

One hundred years ago, when nutritional scientists in Britain and Germany were searching for the answer to this question they figured it would be wise to study the protein intake of a group of men who were both strong and muscular. They concluded that if they could find such a group, it would be reasonable to conclude that they must be taking in the correct amount of protein. Their search took them to the coal mines of Europe, where they found their population of strong, muscular men.

After calculating their protein intake at about 120 grams per day, they announced that this was the ideal amount for everybody

to eat. From this misguided conclusion, more than 100 years ago, the American obsession with getting enough protein was born. This myth persists to our day. Let us put this myth to rest for good.

Let us first look at the relationship between the amount of protein in the diet and the growth rate and maturation of several animals and man. As we can see from the diagram to the right, a higher quantity of protein in the diet accelerates the growth rate and maturation of the animal and at the same time is associated with a shortened life span.

The truth is that we really need very little protein in our diet; far less than we are currently eating. This is true because the human body very efficiently harvests and recycles its own protein. The fact is, the only protein losses that need replacement under normal circumstances, are those that the body cannot retrieve. Those being from the hair, the finger and toe nails, the skin, and a very small amount lost in bowel and bladder activity.

Now the Recommended Daily Allowance (RDA) for protein in men has been set at 55 grams per day and at 45 grams per day for women. It is important that we understand how they arrived at these figures. The National Academy of Sciences sets the RDA for vitamins, minerals, and certain foods by determining how much the body needs each day and then they double that amount.

Milk	Quantity	Protein	CHO*	Sodium	Calcium
Human breast milk	1 cup	2.4 gm	22.4 gm	40 mg	80 mg
Cow's milk	1 cup	8.5 gm	12.0 gm	122 mg	288 mg

*Carbohydrate

Comparison of the Milks of Different Species²⁹

	% of cal. as protein	Time required to double birth weight
Human	5% "	180 days
Mare	11% "	60 days
Cow	15% "	17 days
Goat	17% "	19 days
Dog	30% "	8 days
Cat	40% "	7 days
Rat	19% "	1 days

Therefore, the actual needs of our bodies are only 27.5 and 22.5 grams for men and women, respectively!

What does the typically American diet provide in terms of protein? The answer is often over 100 grams of protein per day,

and as we see, this is several times what we need. By the way, the typical vegetarian diet approaches 100 grams of protein per day and this is, again, easily twice what we require.

Conclusion

Modern scientific studies have shown that adult men and women actually need only about 20-30 grams per day. Frankly, it is impossible to have a diet deficient in protein so long as we maintain our body weight. The only way not to get enough protein is to starve, as is seen in areas of the world where there are epidemics of starvation. These people are said to be suffering from protein calorie malnutrition. Again, by simply maintaining our weight, we are assured of getting enough protein, regardless of what we are eating. ***Indeed, there is no known human disease caused by an inadequate amount of protein in the diet!***

Okay, so are there problems caused by a high protein diet? Indeed there are! As we list, below, some of the major problems with a high protein diet notice the food composition table, which reviews the relative amounts of protein, fats, and carbohydrates in our different food categories.

High Protein Diet Complications

1. Animal sources of protein are loaded with cholesterol and saturated fat and this accelerates aging and shortens life by promoting atherosclerosis and thereby decreasing circulation of oxygen and other vital nutrients.
2. From 1850 to 1995 the average age of sexual maturity for teenage girls declined from 16.3 years to 11.9 years.
3. Cancer is likely primarily promoted by our high intake of animal protein.
4. It decreases physical endurance.
Athletes well know to load up on complex carbohydrates, rather than protein, before any competition
5. It places a heavy burden on the kidneys with kidney disease becoming increasingly common in America.
6. The incomplete absorption of protein is probably the major cause of allergies (including the rapidly increasing rate of asthma especially among our children).
7. Excess nitrogen load overloads kidneys and leads to a decrease in the strength of our immune system.
8. High levels of homocysteine (an amino acid) are closely associated with coronary heart disease.
9. The major cause of osteoporosis with the processing of excess protein by the kidneys requiring calcium, much of which comes directly from the bone stores.

FOOD COMPOSITION

(in percent of calories)

	Protein	Fat	Carbo- hydrate
MEAT	32%	68%	0%
Steak, sirloin	25	75	0
Pork, medium	25	75	0
Chicken, roasted	15	55	0
DAIRY	29%	41%	30%
Milk, whole	21	48	31
Milk, skim	40	3	57
Cheese, cheddar	25	73	2
NUTS	9%	87%	4%
Almonds	12	82	6
Pecans	6	93	2
Walnuts	9	88	3
LEGUMES	29%	12%	59%
Soybeans	33	30	37
Pinto beans	26	3	71
Lentils	29	3	68
GRAINS	13%	8%	79%
Rice, brown	8	4	88
Oatmeal	14	16	70
Wheat, whole-grain	16	5	79
VEGETABLES	14%	4%	82%
Cabbage	22	7	71
Carrots	10	4	86
Potato	11	1	88
FRUITS	6%	3%	91%
Bananas	5	2	93
Peaches	6	2	92
Oranges	8	4	88

Osteoporosis

Osteoporosis is a disease that silently and painlessly weakens the bones of more than 50 million Americans. Previously sturdy bones gradually become thin and fragile; their interiors soft and spongy. As a result, bones break, giving rise to the term brittle bones.

Osteoporosis causes more than two million fractures a year. Hip fractures are often both disabling and deadly. Spinal fractures, while sometimes painless, can rob a person of two to eight inches of height as they age.

Sadly, most people do not know that they have osteoporosis until they fracture a bone or start shrinking in height, and that is very late in the disease.

So osteoporosis is characterized by the loss of the mineral calcium from the

skeleton. If we look at a x-ray of a person that has osteoporosis, we have trouble seeing their bones. They look all washed out. Much of the calcium is gone and the bones are mere shadows of their former selves. For this reason, among others, calcium is very popular. Women especially are told to get at least 1000 to 1500 mg of calcium per day.

In order to get this amount, we are told to drink plenty of milk. We are advised to use plenty of dairy products, calcium fortified orange juice, antacids like tums, or to take supplements like citracal or oscal.

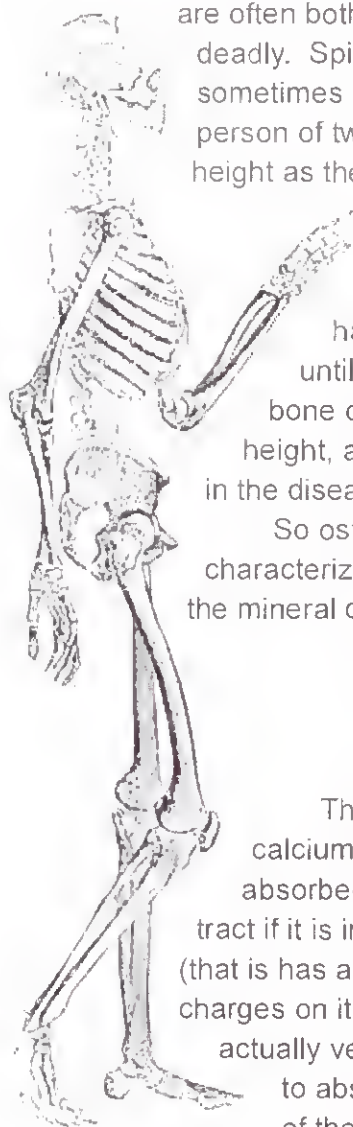
As it turns out there is a lot of misleading information being passed out about osteoporosis and calcium. While it is true that calcium is very important to our health, it is not nearly as important as those who want to sell calcium would like us to believe it is. Tonight, as Paul Harvey might say, we are going to hear the rest of the story about osteoporosis and its relationship to calcium and protein intake!

Calcium Absorption

The fact is that calcium can only be absorbed in our intestinal tract if it is in its ionized state (that is has a couple of positive charges on it). Calcium is actually very hard for our body to absorb. The majority of the calcium that we

ingest goes right on through and out in our stool. It is never absorbed at all!

Now this is true of many compounds that have double charges on them; highly charged ionic substances are not absorbed easily from the intestinal tract. If they have a single charge on them such as sodium or potassium, they can be absorbed very readily. However, if they have a



double positive charge they are not well absorbed.

What are some examples of this truth? Consider the mineral magnesium, which has a couple of positive charges on it. There are some very popular compounds, which contain this mineral, such as milk of magnesia. For what purpose do we use milk of magnesia? Well, it is a laxative; that is, it stimulates bowel activity and it does so without leaving the digestive tract. It goes right on through us. Why is the magnesium not absorbed? It is not absorbed because it has two positive charges on it.

Aluminum is another mineral that has two charges on it. If we read the labels on maalox or mylanta, two popular antacids, we notice that they have half milk of magnesium and half milk of aluminum. The aluminum is constipating; that is, it slows down bowel activity, but it is not absorbed either. It also simply goes right on through us, though it takes its time as it is constipating.

So double charged substances are for the most part not absorbed into the blood stream and calcium is in this group. Calcium is very poorly absorbed. Whether we eat 3000 mgs, 4000 mgs or 5000 mgs of calcium, our actual intake of calcium is of relatively little significance; this is because it is so poorly

absorbed. *The amount of calcium in our diet does not determine the amount of calcium that we absorb.* Rather other factors determine how much calcium we absorb and not the quantity of calcium in our diet.

It turns out that a significant factor in determining the amount of calcium that we absorb is a compound called Vitamin D. It is interesting to note that although Vitamin D is essential to good health, we **do not** need to have it in our diet. Therefore, it is more accurate to consider Vitamin D a hormone than a vitamin. We actually synthesize Vitamin D within our body and its structure is quite similar to hormones. Despite our ability to make all the Vitamin D we need, many of our food products today, such as milk, are fortified with Vitamin D.

How does Vitamin D work? Well, it travels to our small intestine and allows our intestinal tissue the ability to absorb calcium. When we eat food containing calcium, yet Vitamin D is not available in our intestines, the calcium is allowed to slide right on by. Therefore, while calcium in our diet is necessary for strong bones, Vitamin D is probably just as important and maybe more so. Vitamin D is the gatekeeper that allows calcium to be absorbed.

From where do we get Vitamin D if we do not get it in our diet? The answer is sunshine! Sunshine upon the skin induces a chemical process which leads to the production of Vitamin D. If we want to have strong bones then we need to get an adequate amount of sunshine to allow us to absorb the calcium. *Sunshine probably has more to do with preventing osteoporosis than the amount of calcium in the diet!*



Exercise and Our Skeleton

Let us now turn to the role of exercise in the development of strong bones. We are going to look at some fascinating work done by the National Space and Aeronautics Association (NASA).

NASA did the pioneering work in this area. They wondered how gravity affected their astronauts and caused them to become so weak and fragile upon their return to earth. They discovered that as soon as they got into outer space the calcium content of the astronaut's urine went sky high. Their astronauts were dumping calcium like crazy and they discovered that the losses were coming from the bones.

Now, in space, we really do not need a skeleton because of zero gravity. However, this became a real problem when the astronauts returned to earth and the earth's gravity. They had a real tough time walking or even standing up because they had lost so much of their skeleton. The scientists put all this together and realized that if the astronauts did not use their skeletons they would lose them. They needed to exercise while up in space.

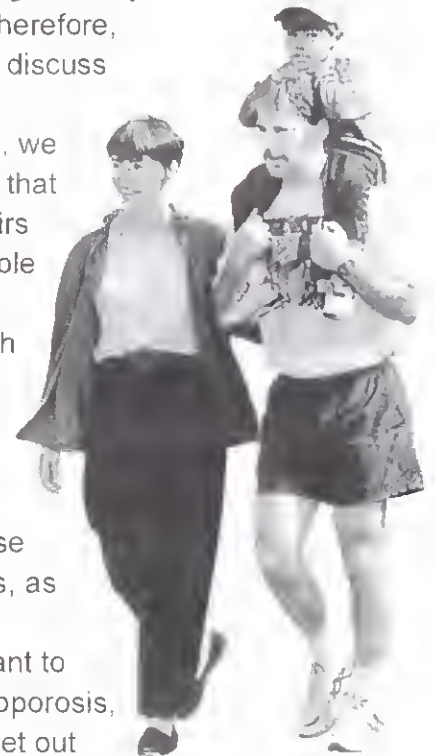
First, they decided to get a little bicycle for the astronauts to ride. However, when they rode the bicycles their calcium continued to pour out. Therefore, they concluded that a bicycle would not prevent them from losing calcium from their bones. It was true that the bicycle was strengthening their muscles and making them sweat and making their heart strong but it was strengthening their bones really very little.

They realized that they needed to

be sending shock waves up through their skeletons. Therefore, they devised a little treadmill device with big rubber belts that hooked onto the astronauts and pulled them down real hard. They stood up with great difficulty and they walked on this treadmill and pounded their feet. As they did so, shock waves were going up and down through their skeleton; and, lo and behold, the calcium in their urine began to go way down. It did not eliminate it completely, but it helped it go down quite dramatically.

What does that tell us about our skeleton? We need to be active. We need to walk! The problem is we live in a society of lazy boy chairs. We live in a society where we do not have to use our skeletons. The next best thing to being in space is being in a lazy boy chair! Therefore, if we want to discuss the cause of osteoporosis, we should know that lazy boy chairs are responsible for this disease much more than a lack of calcium in our diet. We just do not use our skeletons, as we should.

If we want to prevent osteoporosis, we need to get out



and walk everyday. Moreover, walk in the daytime, so we can get a little sunshine on our face. Remember the sunshine is going to give us our Vitamin D. This in addition to the little shocks, will cause the intestines to gobble up much more of the calcium and help us to make good strong bones!

Protein and Our Skeleton

Now, let's finally discuss how a high protein diet leads to osteoporosis!

Our body does not like substances that are acidic. As we exercise, we create weak acids, such as lactic acid. However, our body quickly changes the lactic acid into carbon dioxide and we breathe the carbon dioxide out through our lungs. Therefore, as we build up lactic acid, as we are exercising, we can take a few deep breaths and it is gone. We can get rid of it in a hurry.

However, some acids creep into our body that we can not get rid of so easily. These are called strong acids, such as the sulfates (SO_4), and the phosphates (PO_4). Sulfates and phosphates are strong inorganic acids, which our body does not like at all.

Whenever our body sees a strong acid, it attempts to neutralize it. Since we can not breathe out these strong acids, as we can with lactic acid, the body is forced to use another method to resolve the difficulty.

Let's ask ourselves a question. What is the main compound in Tums and Roloids? The answer is calcium carbonate. Interestingly, this is the very same compound, of which our bones are constructed. So, we actually have a whole skeleton full of antacids inside our bodies. In

Does that make sense? We need to exercise. We need to exercise in fresh air and sunshine. If we do that we will not need to worry about osteoporosis because we will absorb all the calcium we need to keep our bones strong.

fact, if we have an upset stomach we could actually chew on some bone and that would take care of it for us.

In the same way, if we end up with strong acids in our blood stream our body knows how to take care of them. It simply takes some bone or some calcium carbonate and neutralizes it right away. Then the calcium phosphate and calcium sulfate come out in the urine. Therefore, the calcium necessary to do this little trick actually

Strong Acids

Phosphates (PO_4) are neutralized by calcium carbonate (from bone) and excreted through the urine as calcium phosphate

Sulfates (SO_4) are neutralized by calcium carbonate (from bone) and excreted through the urine as calcium sulfate.

Sources of Phosphates & Sulfates

1. Meat Products (Beef, Poultry & Fish)
2. Dairy Products (Milk, Cheese, etc.)
3. Soda Pop (including diet pop)
4. Alcohol (Wine, Liquor & Beer)
5. Coffee
6. Tea

comes from our bones or our skeleton.

Okay, now how do these sulfates and phosphates get into the body? They get into the body by virtue of the food that we eat or drink. What do we eat or drink that contains a lot of sulfates and phosphates? The answer is animal products: that is, meat, poultry, fish, and milk. Flesh foods are the major source of strong acids in the American diet. Processed cheese contains a significant amount of sulfates. Many excellent studies have shown that a meat diet, high in phosphates and sulfates, promotes osteoporosis.

One such study revealed that the average measurable bone loss of female meat-eaters at age 65 is 35% while the average measurable bone loss of female vegetarians at age 65 was only 18%.

As we mentioned earlier, the average American today, consumes 90 to 120 grams total of protein per day--while the ideal protein intake for a human being is 20 to 30 grams per day. Therefore, on average, while most Americans today are worried about getting enough protein, they are in fact eating far more than they need and far more than is good for them period.

The Great Milk Deception

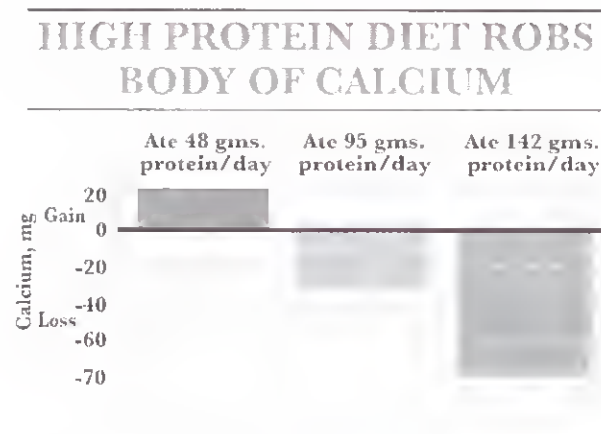
Let us comment briefly on milk, which has its own fantastic mythology in our country. First, let us consider a few facts.

1. After being weaned from their mothers, humans are the only mammals that consume milk.
2. Twenty percent of those of European descent and up to ninety percent of people of African and Asian descent are lactose intolerant. The consumption of dairy products

in these individuals causes abdominal cramps, bloating and diarrhea.

3. Milk intake is likely the number one cause of recurrent respiratory allergies and infections. It is likely that the majority of adults and children with asthma or recurrent ear or sinus infections would be dramatically better if they took in less or no milk and other dairy products.
4. For most Americans, milk is actually a net calcium loser; that is to say, that every time they drink a glass of milk their bodies lose more calcium than is absorbed from the glass of milk in the first place!

Notice in the figure at the left, the results of one of the studies, which reveals this truth. Here we see that the group taking in the most protein was losing a dramatic amount of calcium every day simply because



of their high protein consumption. The excessive protein was leeching calcium from the bones, although they were getting plenty of calcium in their diet.

A mythology has developed around the importance of calcium and drinking cow's milk. In the United States for example, the National Dairy Council---one of the single largest suppliers of nutritional education materials to schools---has nurtured this myth to the degree that Americans have a profound fear of not consuming enough calcium.

Happily, calcium deficiency, caused by an insufficient amount of calcium in the diet, is NOT known to occur in humans!

Therefore, when the Nutrition council says that people should be eating 1500 mg of calcium per day, this advice is only relevant, maybe, to folks eating meat and dairy products. Vegetarians should not need nearly this much calcium in their diet. Why? For the simple reason that vegetarians will not be using much calcium in the process of neutralizing the strong phosphates and sulfates produced by the meat and dairy foods.

Gazing at the rather large "vegan" elephant, to the right, consider ... "can we obtain enough calcium to make a strong skeleton eating only plant foods? Hmm?

Now, what are there other sources of phosphates? If we look at soda cans, we notice that phosphate (in the form of phosphoric acid) is on the ingredient label. Doctors are starting to see young people in their thirties who have osteoporosis. They have osteoporosis because they drink 2-3 liters of soda a day. We have osteoporosis in young people because of the tremendous



intake of soft drinks. In addition to the ill effects of caffeine, carbonation, and sugar: this then is another reason to avoid these beverages.

Let's sum this all up. If we want to prevent osteoporosis, what is really the best way to do it? Should we drink three glasses of milk a day? No! The best way to prevent osteoporosis is to eat as little meat and dairy products as possible, avoid soda, coffee and tea, and get plenty of exercise (outside in the sunshine). If we follow the above lifestyle then we simply stand very little chance of getting osteoporosis.

We will not have to worry about it. We also do not have to worry about getting 1000 or 1500 mgs of calcium. We will not get this disease and we will be able to get by eating a whole lot less calcium than the average American.

Let's mention a few wonderful examples of these truths.

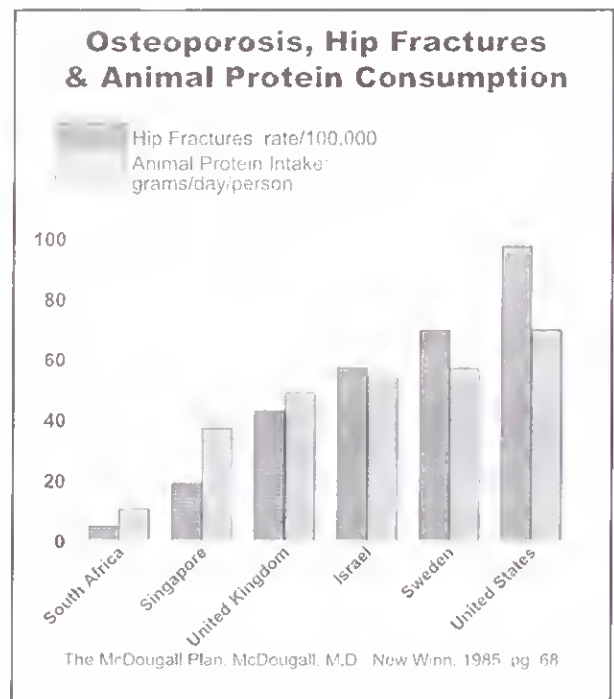
Eskimos in the far north consume diets extremely high in both protein (250-400 gm/day) and calcium (1500 to 2500 mg/day). In spite of their high calcium intake and very active lives, they have the highest rate of osteoporosis of any world population.

The African Bantu woman, on the other hand, consumes an average of 47

grams of protein. While her diet is free of milk, it still provides 250-400 mgs of calcium predominately from plant sources, which is half the amount consumed by western women. Now Bantu women bear an average of ten or more children during their lives and breast-feed each of them for about ten months. Yet, even with this huge calcium drain and relatively low calcium intake, they are essentially free of osteoporosis.

In contrast, relatives of the Bantu who have migrated to the United States and adopted the American dietary lifestyle eventually experience a rate of osteoporosis comparable to that of the rest of the American population.

Most populations around the world average 200-400 mgs of calcium a day without evidence of osteoporosis. *It's strangely paradoxical that osteoporosis*



has become epidemic in the United States, where the consumption of calcium rich dairy products and calcium supplements is the highest in the world.

Notice the graph above. In this research, a group of scientists confirmed the relationship between the consumption of protein from animal products and the frequency of hip fractures (this is the end result of the disease known as osteoporosis).



Spiritual Nugget

The Key to Success

“But put ye on the Lord Jesus Christ, and make not **provision** for the flesh, to fulfill the lusts thereof.”

Romans 13:14

“Those who do nothing to encourage temptation **will** have strength to withstand it when it comes.”

“It is usually far easier to avoid the place of temptation than the temptation itself.”

Fat: Can it be good for us?

After reviewing the basic fat facts in the box to the right and below, let us begin tonight by taking a trip to Scandinavia. To the country of Finland and one of its far eastern counties called Karelia, which has a population of 180,000 people. It has been widely known as the county of beautiful widows, with the majority of them under thirty-five years of age.

Behind this appealing slogan hides the grim fact, that this gorgeous lake-splattered area held the world record for heart disease mortality. Indeed, in some schools, as many as one-third of the children no longer had a living dad. Two-thirds of the deaths in this society were due to heart attacks and strokes, with 50% of the men experiencing angina chest pains before reaching forty-five years of age.

In Karelia, when men in their thirties met each other on the street they often would inquire whether angina had yet been experienced? The most hopeful answer was, not yet! Because in Karelia, most men

Fat Facts

Fats are the most concentrated source of energy of any nutrient we consume.

Fat	9 calories/gram
Carbohydrates	4 calories/gram
Protein	4 calories/gram

The fatty acids, linoleic and linolenic acid, are essential and must be consumed in the diet.

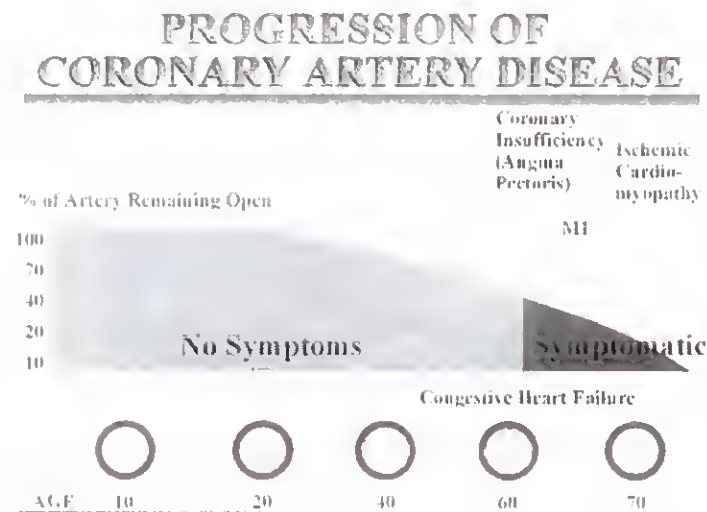
expected to suffer angina by the time they were in their forties (this often being the first symptom of heart disease).

In the figure to the right, notice the way coronary artery disease progresses and the point at which chest pain is often experienced. Is it early or late in the disease process? It is near the end!

Being a woman in this county was not much better. Women in Karelia had three times more heart disease than the world's average.

What was wrong in Karelia? Was the stress of living next to the Russian bear giving them heart disease? No. Stress was not a problem in Karelia. These were not large urban centers but little villages where people lived peacefully. Nevertheless, something was wrong in Karelia! What was it?

Was it a lack of exercise? No! Because most people in Karelia were farmers or lumberjacks. Additionally,



they did not have all the power tools that we have. This was a very physically fit community. In this they exhibited an important truth for us and that is that exercise does not prevent heart disease! If we consume the typical American diet, the best exercise program in the world is not going to prevent it. As an example, recall the great tennis player Arthur Ashe, who was both a Wimbledon champion and heart attack victim by 35 years of age.

We see that it was not a matter of stress. It was not a matter of exercise or the lack of it. Were these people overweight? No, not really. They were not that overweight. Therefore, it was not that either. What was wrong in Karelia?

As we mentioned the men in Karelia were either lumberjacks or farmers; that is dairy farmers. The problem was that the Karelian people were making ample use of the very high fat, low fiber foods they produced, especially dairy products.

Let's get some idea of what breakfast was like for them. It typically consisted of three glasses of fat rich milk, several slices of thickly buttered bread, usually about an eighth to a quarter of an inch thick. Usually they had two eggs and sausage and a mug of coffee with heavy cream (it was really heavy cream with coffee). Other meals, like dinner, mostly consisted of beef, pork and pastries, foods, again, low in fiber and high in fat. Fruits and vegetables were rarely seen.

Of course, what would we expect their average cholesterol level to be? It was around 250-300 mg%. However, the people of Karelia, back in the 1980s, became aware of their dubious distinction of being number one in the world in heart disease and they

Fat Facts II

All natural foods contain not only a combination of fats, carbohydrates, and proteins, but they also have a combination of the three types of fats: saturated, polyunsaturated, and monounsaturated.

Saturated fats are predominantly found in animal products.

Polyunsaturated fats are predominantly found in most plant foods.

With Two exceptions:

Olives and many nuts, which have a preponderance of monounsaturated fats.

Cocoanuts and avocados, which have a preponderance of saturated fats.

Modern food processing has created hydrogenated fats, like margarine, which are even healthier than saturated fats.

High Fat Intake (especially saturated and hydrogenated) is associated with:

1. Decrease immune function
2. Increasing blood clot formation
3. Weaker and stiff blood vessels

decided to do something about it. Many women approached the government and said, "we still have a husband, but we do not want to lose him. Can you help us? Is there something wrong with our diet? What can we do?"

A physician, Dr. Pusca, went to this part of Finland and established an educational program. Stop smoking efforts were strongly undertaken. The dairy industry joined the effort and began to market skim milk. People were encouraged

to grow and eat fresh vegetables and dramatically cut back on butter and all animal products.

There was a lot of cooperation from local industry (the food providers) except for one large sausage factory. The owner was not prepared to take his sausage skins and stuff them with mushrooms and grains to produce a new vegetarian sausage. He was holding out, with his high fat pork product, until...he suffered a heart attack. He then became a believer and started producing a low fat, non-meat sausage.

A housewives association, the Martha's, was set up in every village to organize the meetings and educate the women. They were very successful except for the fact that the medical establishment of Karelia became rather uneasy about this

consumerism movement. They said, "we all know, as doctors, that heart disease has nothing to do with diet. It has nothing to do with lifestyle. It is a genetic problem. We have problems with heart disease in Karelia because of our faulty genes." Happily, the Martha's and the research group won out.

What have the results been? Six years after initiation of this major health promotion program, the annual mortality rate among middle aged men dropped 15%. The heart attack rate dropped 15% and the frequency of strokes decreased by 30%. The cost of the programs that led to all these saved lives averaged out to be < \$1.50 per person per year. Does behavioral change pay? Does lifestyle medicine pay? Does your personal investment in your health pay dividends? Absolutely!

Monkey Diet

Let's look at some animal studies, on monkeys, which have revealed very interesting results. Frankly, we have known for more than thirty years how to effectively kill animals. The only thing we have to do with monkeys is take away their natural diet and give them a typical hospital diet. After four years, the monkeys will die of massive heart attacks.



That is why we always tell our patients "do not stay in the hospital more than four years!"

We can take the twenty-five favorite American foods feed them to monkeys and within thirty months, the monkeys will die. However, the good news is that we can do something else. After producing the 70-90 % arterial narrowing in the coronary arteries, by way of the typical American diet, we can reverse the process. We take these same monkeys, with severely narrowed coronary arteries, and we change their diet back to a simple one consisting of grains and vegetables and maybe even some bananas. Then after two, three, or four years, we discover these same monkeys now are found to have arteries that are wide open, instead of their former condition of 70-90 % blocked. Yes, heart disease is reversible in monkeys! in dogs! in pigs! in roosters!

How about Humans???

This research has proven that we can reliably produce heart disease simply depending on the kind of diet that we feed. If there is a lot of egg yolk involved, a lot of cholesterol and plenty of oils, such as corn oil, we can, in most species, reliably produce heart disease. Further, we can also reverse it. The question is does it work for humans?

In 1989, Dr. Dean Ornish performed a watershed study in the annals of modern medicine. He gathered 50 heart disease patients with dramatically narrowed arteries. These people were having significant bouts of angina, yet for various reasons, would not or could not have the bypass surgery that their heart surgeons were recommending.

He took 50 patients and half of them he put on the 'prudent' American Heart Association (AHA) diet. This diet took them from 40% fat down to 30% fat, and from 500 mgs of cholesterol down to 300 mgs of cholesterol. This group signed on for these modest dietary changes.

What about the other twenty-five patients? He took them and said, "I want you to go on a natural food diet, where the fat content is not 40% or 30% as you have on the AHA diet but 10%; virtually no added fat." It was a diet with no animal products, except for a small amount of skim milk.

Both groups had a battery of very sophisticated tests done to measure the amount of arterial closure or narrowing of their coronary arteries. In fact, per person the evaluation cost was \$80,000. Then, one year later, these same tests were performed to assess for changes.

The cholesterol on the AHA diet was virtually unchanged at 220-230 mgs. While the cholesterol levels in the second group (on the 10% fat diet) had dropped dramatically down to 135-140 mgs.

Then they discovered the most exciting result. The coronary arteries, in this later group, which were initially dramatically narrowed, had already (in < one year) opened up by 10 %. The disease had actually regressed, it had begun to reverse itself. Scientists have proven that when we get our total cholesterol level down below 160 mgs, we start to produce regression or reversal of the disease. As Hippocrates said many years ago, "Let your food be your medicine."

What were the results of the group that implemented the modest dietary change, as recommended by the American Heart Association? Their disease, or narrowing of their coronary arteries, was found to have progressed by yet another 8%. Ouch!

Dr. Dean Ornish said at a subsequent national AHA meeting, "Ladies and Gentleman, I wonder how prudent the AHA prudent diet really is? For this diet seems to promote heart disease rather than turn it around."

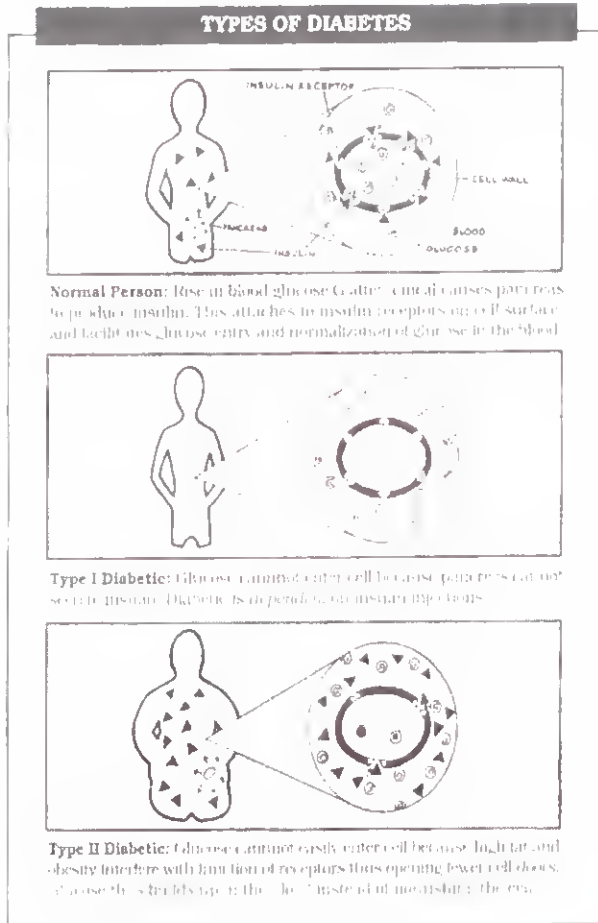
Is Heart Disease Reversible?

Dean Ornish M.D.
Advanced Heart Disease
Coronary arteries > 90% blocked)

#1 Group
American Heart Association
Phase 1 Diet
30% Fat & 300 mg Cholesterol
Result: Disease Progression

#2 Group
Vegetarian Diet
15% Fat & 0 mg Cholesterol
Result: Disease Regression

How about Diabetes and Fat



What is Diabetes? "It runs in my family. must be those faulty genes again!"

Diabetes results when our body loses its ability to properly handle glucose (sugar), causing it to build up to dangerous levels in our blood stream. The problem revolves around insulin, a pancreatic hormone, which enables the cells of our body to absorb glucose, and in so doing, allows the blood sugar levels to remain within a narrow range.

There are two kinds of diabetes. Type 1 afflicts only 2-3 % of diabetics and usually begins in childhood. These people are usually thin and rarely overweight. In the past this type was thought to be hereditary, however researchers, today, are suggesting that in some cases it may be secondary to a wayward immune reaction to cow's milk protein (whey).

Type 2 diabetes, is generally diagnosed after age forty with our increasing middle age spread. In contrast to juvenile diabetics, most type 2 diabetics, when diagnosed, have plenty of insulin in their bodies. However, something blocks the ability of insulin to properly function; it cannot do its job.

What causes Type 2 Diabetes?

Dr. Dennis Burkitt, a scientist famous for his research on the effects of fiber on the human body, went to the beautiful Pacific Islands of Nauru. He found that diabetes was virtually unheard of in these islands. In fact, when he went there on a mission project for the first time, he could not find hypertension, heart disease, certain cancers, or diabetes.

All that changed, however, when phosphates were discovered on Nauru. That discovery made the people of Nauru among the

most affluent, wealthiest people per capita in the whole world. What did these people, who used to live on yams, mangos and papayas and grains, do? One of the first things they did was import an Australian and American chef who could serve them a diet commiserate with their new found wealth. This rich diet was chock full of meat and plenty of oily, greasy specially prepared dishes.

What happened to these formerly healthy natives? When Dr. Burkitt went back to the

island of Nauru, a few years later, he was shocked to find that these wonderful people had now become a natural research laboratory. Their island had become a place where changes in disease rates could be measured in their relationship to diet and quantity of physical activity.

The new statistics revealed that 30% of the people of Nauru over 15 years of age had now developed diabetes and 60% had now developed hypertension. Again, we are forced to consider the power of a faulty diet in promoting diseases, particularly diabetes. Is diabetes a self induced disease? Yes, in most cases it is exactly that!

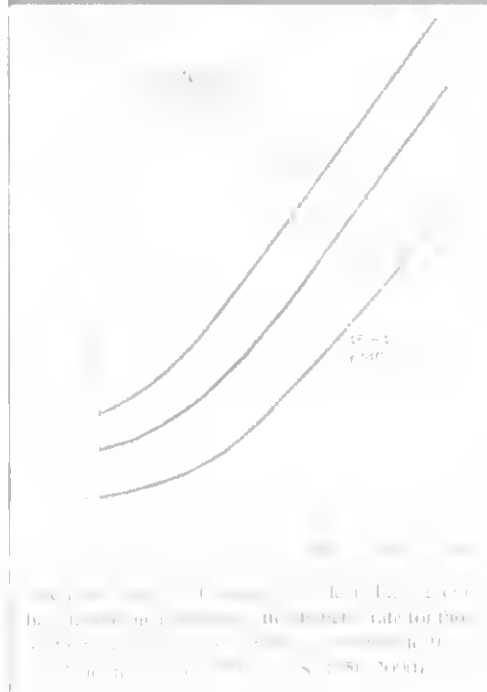
Disarming Diabetes

Diabetes is on the rise in western society. In the United States, for example, adult onset (type 2) diabetes, among those over forty-five years of age, has increased by over 900% since WW II.

Why are we concerned about diabetes? Because diabetes and its vascular (circulation) complications are responsible for >250,000 premature deaths per year, making it one of the leading causes of death in the U. S. It contributes to heart disease by dramatically accelerating atherosclerosis. A diabetic has 18 X more risk of developing kidney disease and >50% of all the kidney dialysis patients are diabetics. The world famous Framingham study has scientifically proven that people with diabetes have a much higher likelihood of developing heart disease.

Most of the present therapies are proving frustrating and largely ineffective in reversing the above trends and complications of this major health problem. We have used insulin injections since 1922. We have used oral drugs for the control of diabetes since 1950. However, neither approach cures the disease. They only control the high blood sugar levels. While it may appear that these drugs seem to help, some research has indicated they can increase the likelihood of a heart attack by ~250%. Further, here again

DIABETES TRENDS BY AGE GROUP



Diabetes Complications

- 2-4 times the risk of death from heart disease.
- 2-4 times the risk of stroke.
- > 70% of diabetics have high blood pressure.
- Diabetes is the leading cause of blindness.
- Diabetes is the leading cause of end-stage kidney disease (over 250,000 receive dialysis or kidney transplant annually).
- 60% of diabetics suffer nervous system damage.
- > 60% of limb amputations are diabetics.
- Increase gum disease and tooth loss.
- Pregnancy complications
- Increase of almost all other illnesses.
- Life expectancy is shortened by 5 to 10 years; contributing to over 250,000 deaths each year.

we observe the phenomenon, discussed earlier, whereby, "drugs simply change the form and location of disease." Liver inflammation leads the list of potentially serious complications due to diabetes medications.

What do the dietetic professionals and the American Diabetic Association offer as their recommended diet? The mainstay of their approach revolves around "carb" counting, whereby they instruct us how to count and limit our carbohydrate intake and instead emphasize foods higher in protein?!?!?!? Sadly, this diet NEVER cures diabetes and is well known to

increase the already serious risk of kidney failure.

What shall we do? It is estimated that this year, in this country, one out of every ten people over forty years of age will develop diabetes. Remember, this is a disease that is virtually unheard of in most non-western societies. Indeed, 80% of the world's population has not heard of diabetes or they know it to be a rare condition. Why? Because they do not count their carbs, they just eat them!!! They eat simpler foods, which are high in fiber and starch, and low in fat and protein!

Diabetes – The Numbers

In America

- About 25 million diabetics
- Over 8% of population
- 1 million **new** cases/year
- 50% are unaware
- Economic cost ~\$200 billion

In the World

- About 250 million diabetics
- 5% of world population
- **800% increase in 20 years**
- 7 of top 10 countries are in the developing world
- China #1 (39 million; 2.7%)
- India #2 (30 million; 6%)
- Caribbean/Middle East rates range from 12-20%

The medical care system has not found a cure for diabetes. The best it can offer is the ability to control the high blood sugar levels. The lifestyle changes that we are talking about in this seminar can offer what the medical care system can not. Freedom from the disease and freedom from a dependence on the medical care system!

Diabetic Numbers

We estimate there are now probably 250 million diabetics in the world. The amazing fact is how the distribution of diabetics has been changing over the past twenty years. It is no longer true, as epidemiologists reported in the 1980s, that half of all diabetics (in the world)

live here in the United States. Rather, today, only about 10% of diabetics live in our country.

Did they immigrate over seas? No. Are Americans getting healthier? Are less of us being diagnosed with diabetes? NO! In fact, we are now adding an additional one

million new diabetics to our roles every year in America. Yet, in reviewing the statistics on the previous page, we realize that the world has indeed been rapidly catching up to us. Isn't it amazing how quickly dietary changes can impact human health especially in the area of diabetes.

By the way, though the numbers have changed dramatically over the past 20 years, it is still probably true that half of all diabetics are

unaware of the fact. Why? Because like most chronic lifestyle induced diseases, symptoms typically occur late, not early, in the disease. Indeed, a diabetic is often first informed of their affliction, when a high blood sugar pops up on a blood test done for other reasons. Doctors have arbitrarily established diabetes to be typically present if a fasting morning blood sugar is > 140 mg% on two separate occasions or > 200 mg% at any time.

So what's the Cause?!

Let's turn to some research by Dr. James Anderson, a very highly respected diabetologist from the University of Kentucky. He turned healthy lean medical students into mild diabetics within less than two weeks.

How did he produce mild diabetics in two weeks? He feed them a diet that contained 65% fat. Let's remember, the American diet is about 40% fat and many other societies around the globe live on a 10-20% fat diet. We are living high off the fat of the land and paying a very high price for it.

Let's review Dr. Anderson's experiment.

He placed these young, healthy, lean medical students on a 65% high fat diet and they all became diabetics in less than two weeks. Then he took a control group and feed them a 5% fat diet, that is, virtually no fat, no oils, and no grease. However, their diet also contained one pound of sugar per day. What do we think happened? Again, he feed them one pound of sugar a day and continued the experiment for eleven weeks. At this point, he closed the experiment because he was not able to produce even one mild diabetic. Are we saying that maybe sugar is not the culprit? Yes, we are. Now, obviously, sugar is not in our best interest, but the real culprit in diabetes resides in the

context of our high fat diet, which paralyzes or inactivates the insulin and our cells.

Remember the diagram above, which displays that most diabetics have an abundance of insulin. For Type 2 diabetics, it is not a matter of an inadequate amount of insulin. Indeed, they have an abundance. The cure for this disease is not found in putting a diabetic on even more insulin! The answer is found in eating in a manner that allows the body to properly use the insulin already produced. This happens when

What Causes Diabetes?

James Anderson M.D.
University of Kentucky

#1 Group
65% Fat Diet

Result: Mild Diabetes
in two weeks

#2 Group
5% Fat Diet
+ One lb. of Sugar/Day
Result: No Diabetes
even after eleven weeks

we simplify our diet. when we begin to eat a diet that has a wide variety of natural foods, foods that are naturally high in fiber and low in fat.

Dr. Anderson's conclusion was that, "95% of adult onset diabetics on oral drugs could be off such drugs in < eight weeks and 50-75% could normalize their blood sugar and get off **all** insulin within weeks."

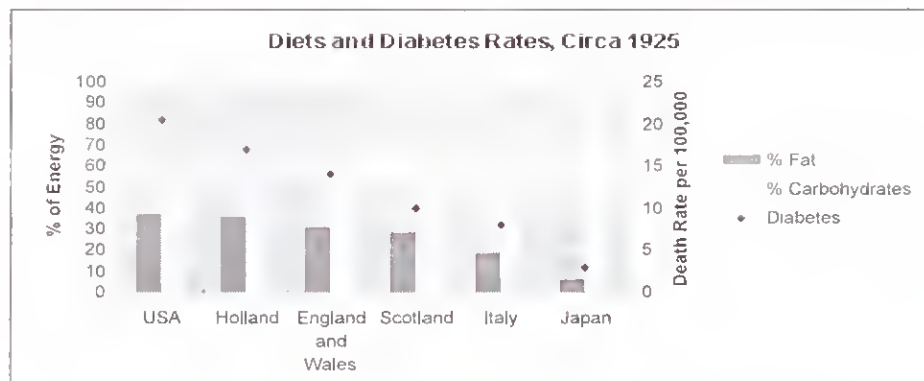
In 1955, a physician, Dr. Inder Singh studied 80 insulin-taking diabetics. He placed them on an 11% fat diet; that is natural foods high in fiber and the results were amazing. In six weeks, 50 (out of 80) patients were off all insulin and in 18 weeks, 68 (all but 12) of the patients were off all insulin injections.

His research was published in the British journal of medicine (Lancet). In his article he stated that "On a very low fat diet, the insulin that is being produced by the body begins to exert its curative effect within days. And most people can be stabilized on such a diet plan very easily. Most people are totally cured."

Dr. Anderson Research Study

- 22 diabetic patients on insulin
- Average 24 units insulin/day
- 3 weeks on a very low fat diet
- All 22 patients off all insulin
- Follow-up in five years revealed all still free from insulin with normal blood sugars.

It is so very interesting that these facts were known and understood even at the beginning of the 20th century. Notice the most interesting graph, below, which is reproduced from a study done in 1925! Here again we find illustrated the truth that wherever a society is found that consumes high amounts of fat and lower amounts of carbohydrates, the rate of diabetes will be significantly higher.



Diabetes is usually a self-induced disease

The good news is that in the majority of cases, we can prevent this terribly common disease. Indeed, ***we can reverse and cure*** this disease, if we will just make some simple changes in our food habits. The question for each of us is will we continue to live to eat or instead will we choose to eat to live? The answer is the single greatest factor in not only preventing and curing diabetes, but also in determining our overall health, longevity and quite possibly our eternal destiny!

Our Sweet Tooth

In 1984, an infamous event occurred, little noticed by the evening news. For the first time in history, Americans drank more fluid in the form of soft drinks than water.

The 6 ½ oz bottle of the 1950s has given way to the 64 oz, 600 calorie Super Big Gulp, the Pop Belly special! Amazingly, many today, especially young people, get most of their liquid requirements from cans of soda pop, with the average American consuming about 64,000 calories of sugar annually from soft drinks alone. This is no small amount when we recognize that it takes only 3,500 excess calories in our diet to gain one pound of body weight.

Carbohydrates are made up of two categories, these being simple (sugar), and complex (starch and fiber). We noted from the chart on page 10 that our intake of sugar has went from 10% of total calories in 1860 to about 25 in 2000. Moreover, our intake of fat has also dramatically increased, and these gains have both been at the expense of a diminishing intake of complex carbohydrates. It is important to realize that the healthiest groups of people in the world consume 60, 70, and even 80 percent of their daily calories in the form of carbohydrates, with the majority of these being the complex variety.

We began these meetings by discussing the Twin Errors of the American diet. We recall these were, first, the excessive use of processed, refined foods and, second, the dependence on animal products. Sadly, many who have moved away from a meat-based diet have failed to, in like fashion, move away from refined

The expanding soda bottle



foods, which are usually high in fat, sugar and a host of chemicals. We discussed animal products second and for far less time in this first presentation for a reason! Indeed, reducing refined foods is probably more important if we really are serious about improving our health.

We have thus far, highlighted, some of the effects of a high fat diet on health and now we will look at the effect of this other common component of processed foods and drinks, and that is sugar. Refined sugars make up around twenty percent of the calories most Americans eat—more than 30 teaspoons per day. Much of this sugar is **well-hidden** in food and beverages. We need to realize that while sugar contains virtually no nutrients or fiber, it is loaded with calories. The more sugar-laden processed foods we consume, the

less capacity we will have for nutrient-rich foods like fruits, grains, and vegetables. This is a very important principle! ***It is not simply the avoidance of unhealthy foods we are after, but rather the greater consumption of healthful foods like***

fruits, beans, vegetables, nuts and whole grains. However, when we eat these high caloric, nutrient-poor foods, we will not be able to find space in our diet to incorporate the necessary protective quantities of nutrient rich foods.

Sugar and Health

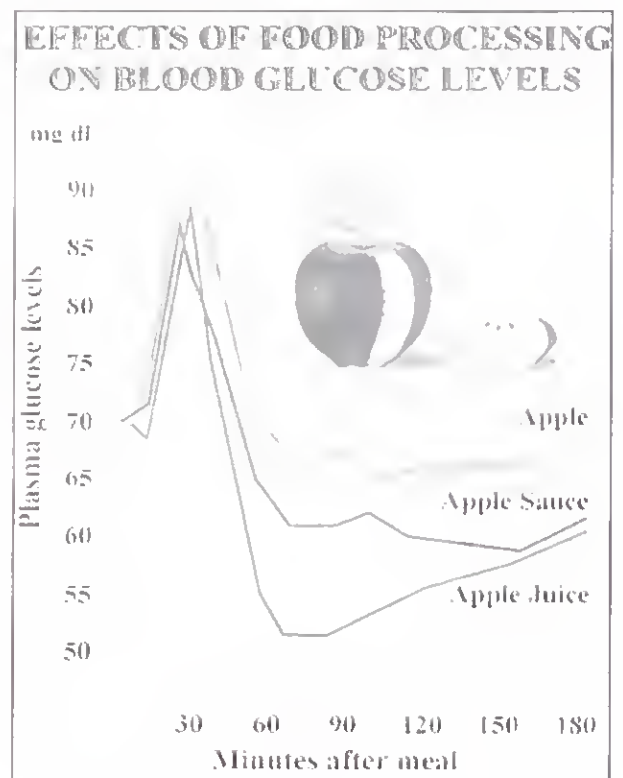
It is important to recognize that when eaten apart from fiber, simple sugars are associated with a myriad of health problems. These include dental cavities, obesity, high triglycerides, the oxidized toxic form of cholesterol, malnutrition, decreased resistance to infectious diseases and cancer, and behavioral difficulties. This is true whether the simple sugar is in the form of white sugar, brown sugar, dextrose, sucrose, lactose, honey, molasses, fructose, corn syrup, maple syrup, or fruit juice. Isn't it interesting how many different names by which sugar is called on the nutritional labels?

Refined sugar also affects our quality of life in ways such as:

1. A high sugar diet, especially by the consumption of fruit juices and sodas, increases the severity of premenstrual syndrome, fatigue, anxiety and phobia syndromes, and depression.
2. It decreases cognitive or intellectual function, while increasing the frequency of temper tantrums, disobedience, and attention deficit disorders in children.
3. Hypoglycemia diminishes our self-control and has even been shown to significantly contribute to the rate of habitual criminality.

Much of the results noted above are due to the separation of sugar from its natural protector nutrient ***fiber***. Without fiber the refined sugar induces the body to overreact and produce excessive amounts of insulin. This leads, in a short time, to blood sugar levels that are lower than normal.

One classic study examined the effects of eating apples in one of three different physical forms: as whole apples, as



applesauce, or as apple juice. Although the same number of calories was consumed from each preparation, eating the apples kept blood sugars steadier than drinking apple juice or using applesauce alone. The change of blood sugar levels, over a short period of time, after eating apples in the three forms, is shown in the figure above.

Notice that the blood sugar levels peaked for all three at the same level ~30 minutes after eating. Then all levels decreased as sharply as they rose, but each to a different low point. The level for the apple juice consumer fell the lowest, to ~50. The level for the applesauce eater

went down to ~60, while the whole apple eater fell to ~65 at the lowest point. The whole apple eater's level stayed constant at the high level for the remaining two hours, while the level for the other two stayed at lower values.

Eating natural, unrefined sugar, such as is found in apples, oranges, pears, etc. is what we want. Because these foods are packed with many nutrients, which are absolutely necessary, like fiber. Remember the fiber, found in unrefined foods, slows the rate of simple sugar absorption, allowing our body to use the energy at a slower rate.

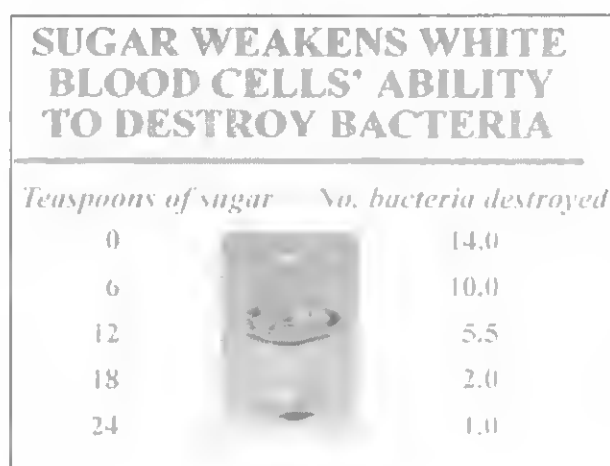
Sugar and the Immune System

Researchers have performed studies examining how sugar consumption weakens the ability of white blood cells to destroy bacteria. These studies have shown that the capacity for white blood cells to destroy bacteria weakens as sugar consumption rises. These findings are tabulated in the chart below.

Note that if a person consumed no unrefined sugar for twelve hours, each

white blood cell could destroy an average of fourteen bacteria. If that same individual ate the equivalent of six teaspoons of sugar, each white blood cell could only eliminate ten bacteria—a 25 percent decrease in killing power. Progressive deterioration in the white blood cells' bacteria fighting capacity was then seen as larger quantities of sugar were consumed. When 24 teaspoons of sugar were consumed, the white blood cells were so compromised that they could only destroy an average of one bacterium each. That represents a 92 percent reduction!

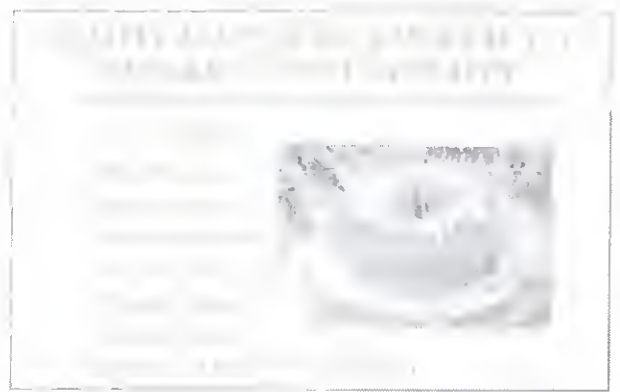
The researchers, further demonstrated, that sugars impairing effects on white blood cells are not short lived. The impairment lasted a full five hours in normal subjects. They also discovered an interesting sidelight: a 36 hour fast seemed to significantly increase the ability of the white blood cells to kill off bacteria. When we are sick and not hungry, it is thus to our



advantage to avoid eating, or at least to eat very sparingly for a day or two. Mom was right after all, wasn't she!

Another sobering linkage involves sugar and cancer. Many different cancers have been statistically linked to sugar consumption in scientific studies. A listing of these is compiled in the chart to the right. One of the theories behind this link is the effect of sugar on our white blood cells, rendering the body less able to fight off the growth of cancerous cells.

In light of all this research, it is interesting to note the caution mentioned in a well-known health book. Over one hundred years ago the author wrote, "... sugar, when largely used, is more injurious than meat." The Holy Scriptures also



recorded reservations about simple sugars. "If you find honey, eat just enough, too much of it and you will vomit" Proverbs 25:16.

Americans are beginning to heed the warnings regarding meat, but have not yet begun to appreciate that in some respects high levels of sugar are even more harmful than consuming meat.

Artificial Sweeteners

What about artificial sweeteners? Today many believe artificial sweeteners are a good alternative to sugar in everything from soft drinks to cakes and candies because they contain fewer calories.

Do low calorie soft drinks really work? Developed to help manage the increasing weight of many Americans, we are sadly left to wonder if they have actually contributed



to this very same problem. The difficulty here is the same as with all processed food products. They are created for a specific benefit, but have many other unintended consequences. In this case, these artificial sweeteners are 200 to 13,000 times sweeter than sugar and this intense stimulation can quickly and profoundly desensitize the mechanisms of appetite satisfaction. Thus products such as NutraSweet and saccharin, despite having virtually no calories, increase our appetite and are a significant cause of the carbohydrate addictions that lead so many to struggle with overweightness. One researcher stated, "We found that hunger **increases** after drinking just a liter of aspartame sweetened soda."

Simply put, artificial sweeteners increase our desire for real sweeteners!

Reeducate our Sweet Tooth

To reduce the sugar in our diet, start by substituting naturally sweet foods for sugared snacks. A sweet tooth can be reeducated to enjoy less concentrated sweets. Fruit and deserts sweetened with fruit are good alternatives. Let's try this recipe for a special sweet treat and get our taste buds ready for heaven.

"And he showed me a pure river of water of life, clear as crystal, proceeding out of the throne of God and of the Lamb. In the midst of the street of it, and on either side of the river, was there the tree of life, which bare twelve manner of fruits, and yielded her fruit every month: and the leaves of the tree were for the healing of the nations"
Revelation 22:1,2.

Fruit Smoothies

2 frozen, ripe bananas
3 or 4 soft dates

1 c. pineapple juice
2 c. frozen fruit

Blend dates and pineapple juice until smooth. Add bananas and fruit. Blend until it is the consistency of soft ice cream. Delicious! It also makes a great topping for whole-grain waffles and pancakes.

Try these flavors:

strawberries
peaches
orange juice

blueberries
crushed pineapple
fresh blackberries

Salt; is it losing its favor?

When we look around the world, we find populations everywhere that have a salt intake of < 2000 milligrams a day and have virtually no high blood pressure problems. On the other hand, Americans and many other Westernized people, eat up to ten times as much, that is, up to 20,000 milligrams of salt per day. We pay for it with high blood pressure, heart failure, and other problems related to fluid retention.

The components of salt, sodium and chloride, are very important minerals, as every cell of our body requires them for proper function. However, while they are essential, in excess, they cause problems. Excess sodium attracts excess water into the body and especially into the circulation system.

High blood pressure runs in my family. That is why I have it, isn't it?

Well, Dr. Lot Page did some very interesting work several years back. He studied a tribe on the Solomon Island called the Lau tribe. He found that the Lau's that lived in the mountainous part of the island had no high blood pressure problems at all, while those that lived at the coast had massive hypertension. This puzzled him greatly. He could not understand why some people in a genetically uniform population had high blood pressure and others did not.

After a great deal of observation, he finally figured it out. The people in the mountains cooked their vegetables in the

mountain water, which was very low in salt. However, those who lived at the coast, boiled their vegetables directly in the ocean water, that is, the salty, ocean water. In so doing, they took in about 20 grams of salt per day and this has resulted in their massive high blood pressure problem.

He also looked at farmers in northern Japan who preserved much of their food with salt and who consumed an average of 30 grams of salt per day. He found that 60% of these Japanese farmers had hypertension, with stroke their most common cause of death.

After looking at many, many societies around the world, Dr. Page concluded, "without exception, low blood pressure societies are low salt consuming societies. And high blood pressure societies are high salt consuming societies."

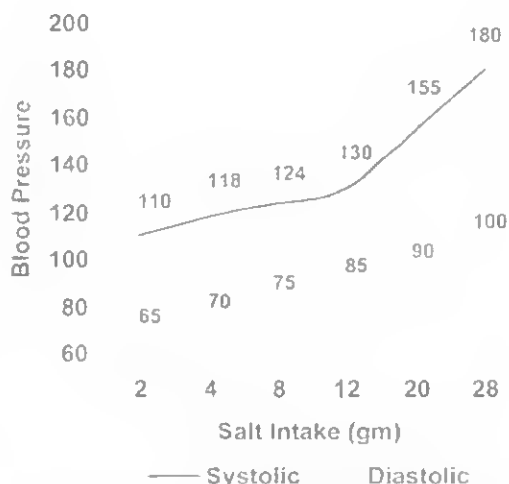
Note the chart to the right, seen earlier, which illustrates this fact. Here we have twenty-seven different populations, analyzed with regard to salt intake and blood pressure

SALT RAISES BLOOD PRESSURE

1. Societies that ingest little or no salt have no hypertension.
2. When diets very low in salt, such as the rice and fruit diet, are given to hypertensive patients, blood pressure often falls toward normal.
3. Changing to a diet that is only moderately low in salt produces only small reductions in blood pressure.
4. Salt-induced hypertension has been produced in both man and experimental animals.



Blood Pressure & Salt in 27 Human Populations



levels. We see that when we come to a society all we have to do is measure the amount of salt intake. Notice the linear relationship, that is, the more salt we eat the higher our blood pressure.

Well, then, how much salt do we actually need? We need ~500 to 1000 milligrams of salt per day to be in good health. How much do we Americans take in on a daily basis? Would we believe 10,000 to 30,000 milligrams of salt daily!

In ancient days, salt was scarce and high priced. History books reveal that Roman soldiers were often paid in salt allowances. Salt was considered very precious; even precious as gold, a rare commodity to be used in small amounts. Our historical regard for it shows in phrases like "salt of the earth" and "worth one's weight in salt." Even the word "salary" is derived from the root word "salt."

In our society, we routinely consume 20 to 50 times the necessary amount, and as we have seen, whenever we have a society

consuming > 5000 milligrams of salt per day, we will find mass hypertension. It is quite clear that it is not in our best interest to eat high amounts of salt. In our society, salt is perhaps the second most abused food additive after sugar. Many of us would lose five to seven pounds in just a couple days if we went on a low salt diet.

Dr. James Hunt one of the foremost hypertension specialists in the world stated, "With a reduction to no more than 5000 milligrams of salt consumption per day, hypertension could be prevented and high blood pressure would probably disappear as a major public health problem in America."

Isn't that amazing? Changing our diet to have less salt would probably eliminate 50-85% of all of the high blood pressure problems in our American society. So why don't we do it? The first reason is taste. One of the hardest things to do is to shift towards a blander diet. However, in this struggle there is a great spiritual lesson for all of life for us.

If we are used to a high salt diet and we try to go on a low salt diet, we need to stick with it for two to three weeks. It may be rough but we need to remember that

WHAT'S YOUR RISK?

High blood pressure (greater risk of disease)	above 140 or above 90	140	90
Blood pressure that increases the risk of disease	130 to 139 or 85 to 89 (high-normal)	130	85
	120 to 129 or 80 to 84 (normal)	120	80
Optimal blood pressure	below 120 and below 80		

Numbers apply to adults who are not taking drugs to lower their blood pressure.
If your systolic and diastolic pressures fall into different categories your risk depends on the higher category.

much of the taste sensation resides not in our mouth but above our ear lobes. If this fairly bland low salt diet can be maintained for two to three weeks, we will be absolutely amazed when by accident we stumble upon a typical salty dish. We then will realize how salty that food really is. Moreover, we will then wonder how anybody could eat that kind of food. So remember, we have to re-train our taste buds. Oh, by the way, there is special help available to us in this fight. We will say more about this in two weeks.

An important point to understand is that much of the salt we eat is not just from the salt shaker. In fact, 70-80% of our salt intake is from refined foods. Most of us recognize that potato chips, pretzels, and popcorn are usually very high in salt, but we are amazed to learn the amounts of salt

FOOD PROCESSING — HIDDEN SALT

FOOD Natural State	SALT (mg)	FOOD Commercial, Processed	SALT (mg)
Apple (1 fresh).....	...5	Apple Pie (1 slice).....	500
White Beans (1 cup).....	12	Chili & Beans (1 cup).....	3,000
Rice, Brown (1 cup).....	12	Minute Rice (1 cup).....	1,000
Wheat Flakes (2 oz).....	20	Wheaties (2 oz).....	1,850
Potato (1 fresh, 5 oz).....	20	Potato Chips (5 oz bag).....	3,500
Tomato (1 fresh).....	...35	Tomato Sauce (1/2 cup).....	1,950
		Tomato Soup (1 cup).....	2,200
Beef, lean (1 lb).....	140	Corned Beef (1 lb).....	2,360
Milk (1 cup).....	300	Cheese, Amer. (2 slices).....	2,050
Chicken (8 oz).....	300	Kentucky Fried Chicken (3-piece dinner).....	5,600

hidden in processed foods. Therefore, it is not enough just to hide the salt shaker. We also have to begin to do something about refined foods.

Here it comes again! Let our food be our medicine. We need to eat more natural foods because they are extraordinarily low in salt!

Suggested Seasonings for Vegetables

- Asparagus:** lemon juice, chives, thyme, tarragon.
- Beans, dried:** bay leaf, garlic, marjoram, onion, oregano.
- Beans, green:** basil, dill seed, thyme, onion, tarragon.
- Beets:** lemon juice or lemon peel.
- Broccoli:** lemon juice, dill, oregano.
- Cabbage:** creole cabbage with tomatoes, green pepper, garlic, and onion.
- Carrots:** parsley, mint, dillweed, lemon peel, sesame seed.
- Cauliflower:** Italian seasonings, paprika, sesame seed.
- Celery:** stir-fry with low-salt soy sauce, sesame seeds, and tomato.
- Corn:** bell pepper, pimiento, tomatoes, chives.
- Okra:** try broiling for a crisp texture.
- Peas:** fresh mushrooms, pearl onions, water chestnuts.
- Potatoes:** parsley, chopped green pepper, onion, chives.
- Spinach:** lemon juice, rosemary.
- Squash:** bake with chopped apple and lemon juice.
- Tomatoes:** sprinkle with curry powder; broil with mushrooms, green pepper, and onion.

Our Sufferings

As we study this very personal issue, and seek to better understand our sufferings, let's turn to the Scriptures and a familiar question often posed about the apostle Paul. What was the thorn of suffering with which the Paul was afflicted? Now, we are not exactly sure. However as we study the Bible, we get a pretty good idea that Paul had problems with his vision. First, let's read from 2 Corinthians 12:7-10, where he talks about this issue.

"And lest I should be exalted above measure through the abundance of the revelations, there was given to me a thorn in the flesh, the messenger of Satan to buffet me, lest I should be exalted above measure. For this thing I besought the Lord thrice, that it might depart from me. And he said unto me, My grace is sufficient for thee: for my strength is made perfect in weakness. Most gladly therefore will I rather glory in my infirmities, that the power of Christ may rest upon me. Therefore I take pleasure in infirmities, in reproaches, in necessities, in persecutions, in distresses for Christ's sake: for when I am weak, then am I strong."

There has been much speculation, from Bible scholars, about this thorn in the flesh. Some believe that Paul suffered from epilepsy. Let's do some investigating. Notice that one of the first things to happen to the apostle Paul when he had his vision of Jesus (Acts 9), on the road to Damascus, was that he was stricken blind for three days and could see nothing. At the end of the three days, scales fell from his eyes, and he could see again. Yet, we have reason to believe that

his sight was not completely restored.

For instance, as we study Paul's letters, we come to realize that they were actually written by other people. In Romans 16:22, we read, "I Tertius, who wrote this epistle,..." Then at the end of 2 Thessalonians (3:17), Paul adds, "I am writing this passage in my own hand." Indicating that it was uncommon for him to do the writing himself. In Galatians 6:11, he tells us, "I am writing with very large letters." And then in 4:15, he comments "that, if it had been possible, ye [speaking of the Galatians] would have plucked out your own eyes, and have given them to me." A pretty graphic clue for us.

Finally, in the book of Acts 23:1-5, we find Paul before a Jewish council speaking very sharply to the High Priest. His tone of voice caused the officials to question his lack of respect for God's High Priest. To which Paul said, "I didn't recognize that he was the High Priest." Now before his conversion experience, Paul had been a member of the Jewish High council and thus these men were very, very well known to Him. How then could he not recognize the High Priest unless he had trouble seeing him clearly? This encounter also gives us reason to suspect that Paul had very poor eye sight.

Why did the Lord allow this infirmity to remain? The reason given by God Himself was that Paul's weak eyesight rendered him dependent on others and thereby helped him remain humble. As we just read, Paul was a man who was given so many revelations of God, so much of the Holy Spirit, and so much power in his preaching that the Lord

saw a need to protect Paul from being exalted in his own greatness.

Here then the Bible instructs us in one of the reasons that God allows suffering. The fact is, we are by nature prone to be self-sufficient and sometimes when we are well with money in the bank, healthy bodies, and abundant blessings, we are in danger of forgetting the Lord. Notice one of the warnings that Moses gave the children of Israel as they were about to enter into the Promised Land (Deuteronomy 6:10-12). He said, "beware, be on your guard, when you enter into this land, and you eat from trees that you did not plant, and you drink the wine from vineyards that you did not plant, and you drink the water from wells that you did not dig, and you move into houses that you didn't build, and you are relaxed and you are prosperous, beware, lest you forget the Lord."

In times of prosperity, we have a tendency to forget God. In adversity, however, with a heavy load on our backs, we are sent to our knees; when flat on our back, we are more inclined to look up. Thus, God, in His mercy, sometimes allows suffering to come to the ones He loves, in order to save them. Peter speaks about this a little bit in 1 Peter 4:12, 13. Here we read, "Beloved, think it not strange concerning the fiery trial which is to try you, as though some strange thing happened unto you: But rejoice, inasmuch as ye are partakers of Christ's sufferings; that, when his glory shall be revealed, ye may be glad also with exceeding joy."

God, in His infinite wisdom, sometimes allows us to suffer. He does this, designing these difficulties, to drive us into the arms of the Saviour. When a lamb sees a wolf coming, he runs to the shepherd. When we

are attacked by the devil, we should run to our refuge, which is Jesus.

Some have insinuated that if we just have enough faith, God will heal us. And if we are not healed, it is because we do not have enough faith. The Bible does not bear out this philosophy. The apostle Paul was a man filled with faith and he prayed three times that he might be healed from his affliction of poor eye sight. However, God decided that it should remain, so that His strength might be made perfect in weakness. Now we believe in healing and we believe that God does answer the prayer of faith. Yet we also know from the Bible that sometimes God answers by saying no.

Remember that Elijah, a prophet of God, filled with the Holy Spirit, went to heaven in a fiery chariot. Yet Elisha, succeeding him as prophet and receiving a double portion of his Spirit, died of a lingering sickness. Moreover, while Elijah was translated, not seeing death, John the Baptist, the greatest of the prophets, languished in a dungeon alone and was ultimately beheaded.

Our, all-knowing Saviour, considers each individual and their limit of endurance as well as how they might best glorify their King. The Bible says in 1 Corinthians 10:13, "...God is faithful, who will not suffer you to be tempted above that ye are able; but will with the temptation also make a way of escape, that ye may be able to bear it." Therefore, if we are suffering from some kind of physical or emotional problem, we are privileged to be comforted by God's promise (Romans 8:28) that He will only allow us to experience what is for our best and what we would choose, if we also could see the end from the beginning.

Dietary Supplements: A Necessity?

"Okay, so medications will not cure my diseases, how about nutritional supplements? After all, I hear they are good for everything from arthritis to warts. Besides, I want more than simply being free of diseases; I want to be in the best of health. I want not only a long life but a high quality life."

"I hear supplements are the way to optimize my health and, you know, I don't always eat the right things, so how about taking a few of these 'just in case.' Then I will not have to worry about eating right all the time, because I'm covered!"

We have all thought these things, at

one time or another, haven't we!

Let's talk about nutritional supplements--THE REAL STORY. This is truly a fascinating subject and quite timely given all the money we Americans are spending on these products (2005 statistics; over 20 billion in sales, with four out of every ten Americans regularly using supplements). Dietary supplements include Vitamins, Minerals, Herbs, Digestive enzymes, and Phytochemicals among others, with the most popular supplements being vitamin C, calcium, multivitamins, iron, B vitamin complex, and vitamin E.

History

Let's consider vitamins and specifically vitamin C as an example of some important principles as to how our body uses these nutrients.

As we study human history, we discover that the only vitamin deficiency disease known throughout all of human history, until the last two centuries, was vitamin C deficiency and that resulted in a disease known as scurvy.

This disease was the scourge of armies, navies, and others that had to take long trips. The reason was that these people had to carry most of their food with them and with the passage of time vitamin C decays out of food in a process called oxidation. Therefore, the vitamin C content in their food simply disappeared in a short period of time. The diet that men would

get aboard ships, or the diet they would get from the cook in the mess hall on the march, would end up often leading to scurvy because of its progressively decreasing vitamin C content.

Now there are a lot of other vitamin deficiency diseases like pellagra (niacin), beriberi (thiamine), but not one of them existed in the history of mankind until we started to refine foods. Before the 1700's, and before the scientific revolution, there were no vitamin deficiency diseases found to occur in humans, except for scurvy.

What does that tell us about our diet?

If we eat unrefined foods, we do not have to worry about vitamin deficiencies, because we will get all the vitamins necessary from our food.

Food Preservation and Nutrition

Today, with our modern technologies, we have wonderful ways of preserving foods. For example, freezing, cooling and canning all result in food that retains a high percentage of its vitamin content. For example, the vitamin C content in a can of peas is very high. Now, canned foods are not best because of their high salt content as well as their overall taste and appearance. A can of peas may look rather greenish, having lost its natural color but the truth is that its vitamin C content is still very high.

Why is this so? Because oxidation (decay) of vitamin C requires oxygen and since there is no oxygen inside a can of food, the vitamin C content of canned peas is actually very high. It is also quite high in frozen peas, despite the abundance of oxygen, because oxidation proceeds very slowly at cold temperatures.

Our modern era of transportation causes some interesting situations. For

example, one might buy some fresh California grown peas at the market

and be totally unaware that they were side tracked for a week or two before they got to the market. This delay might render them to be somewhat limp and might also affect their nutritional value. Chances are canned or frozen peas would have a higher vitamin C content than these 'fresh' peas bought at the market because the former have been protected from the ravages of the process of oxidation.

***Therefore, we might appropriately suggest that fresh foods, locally grown have the best nutritional value. However, out of season produce frequently will have greater nutritional value if purchased frozen or canned.

Recommended Daily Requirements

Amazingly, vitamin deficiency conditions, even with our high intake of refined, nutritionally depleted foods, are very rare in America.

Why is this true and how much of these nutrients do we need? Let's attempt to answer this question by illustrating what happens with our intake of vitamin C.

How much vitamin C should we get? First things first, we want to get enough so we do not get scurvy! Interestingly, the amount of vitamin C that it takes to prevent scurvy is just ten mgs per day. That's not very much at all, is it? While we certainly do

not want to get scurvy, we also want to be in the best of health and the question then becomes "maybe ten mgs is not enough for the best of health."

Would more be healthier and just how much more?

To answer this we need to understand that our body's relationship with vitamin C is similar to a sponge and water. Let's explain. Our body does not readily store vitamin C, since it is only stored in watery tissues like muscles and blood cells. At first, the more we consume, the higher the vitamin C levels in these cells of our body. However, there

comes a point, like a sponge with water, when our body becomes saturated with vitamin C. At this point, we will be unable to hold even one more molecule of vitamin C.

When we reach this saturation level, what happens if we continue consuming vitamin C? Well, God has built into our bodies a system that protects us from too much of anything. In the case of more vitamin C than our body can handle, we begin to increase the number of certain liver enzymes, whose job it is to chew up and break down vitamin C into its metabolic byproducts. Additionally, our kidneys begin to spill vitamin C and it starts to come out in our urine.

Therefore, at the saturation point, we may double our vitamin C intake, yet our body tissue levels will not increase. Because we are already saturated with as much vitamin C as we can hold and any extra now is simply chewed up by the liver or removed from the body by the kidneys.

With the above information, we all can probably agree that we do not need more vitamin C, at any one time, than our body can hold. Therefore, we have narrowed the range of vitamin C necessary to be optimally healthy, to somewhere between the amount

Recommended Daily Requirements

	Vitamin C (mgs)
Prevent Scurvy	10
Saturation Level	45
Average American	200
Supplements	250-19,000
Optimum	10-45

to prevent scurvy (ten mgs) and the amount necessary to saturate our body. Agreed?

We need to realize that the optimum amount might be somewhat less than the saturation amount. However, at least if we are going to allow for the maximum amount that our body can hold, we can be confident that that is enough. The question then is, "how much vitamin C do we need in our diet per day to totally saturate our body?" The answer is that it takes all of forty-five mgs per day to accomplish total body saturation!

Now the average American diet has about 200 mgs of vitamin C per day and this from a diet that includes pringles, twinkies, koolaid and stuff like that. The bottom line is that the typical American gets far more than the 45 mgs of vitamin C per day necessary to saturate our bodies.

Megadosing

Yet, like the protein story, many Americans are quite worried that they are not getting enough vitamin C. So they take an extra 250, 500, 1000, 2000, 3000, 5000, or 19,000 mgs per day. Despite all the brilliance of Nobel Prize winner Dr. Linus Pauling, who championed megadosing of vitamin C, this makes no scientific sense.

Let's explain this briefly. The fact is that vitamin C does actually have some

medicinal benefits in high doses. For instance, there are times when a patient with recurrent urinary infections will in fact benefit from 500 or 1000 milligrams of vitamin C. By acidifying the urine, vitamin C (otherwise known as ascorbic acid), creates an environment in the bladder that is inhospitable to bacteria. When a person takes 1000 mgs by mouth, we expect virtually 1000 mgs to come out in the urine

and assist with the prevention of bladder infections.

Now, if one routinely takes 1000 mgs of vitamin C per day, it turns out that their total body vitamin C levels are actually slightly less than another who is taking only forty-five mgs per day. The reason for this oddity is that the one taking 1000 mgs per day has a body that has become very skilled at getting rid of vitamin C. If their body sees, tastes or finds vitamin C, it destroys it immediately because they are taking more than they need. Interestingly, then again, the one who is taking 1000 mgs per day is so skilled at getting rid of it, that their total body stores are actually somewhat less than the person who is only taking forty-five mgs per day.

Now, let's say that the person taking 1000 mgs per day hears this presentation tonight and decides to stop taking their vitamin C supplement. They cut back down to the 200 mgs per day, which they get with their average American diet. What, then, is going to happen to the vitamin C levels in their body? Are they going to go up? No, in fact, they go down. They go down, very seriously, and this person begins to feel bad. They are actually beginning to experience the symptoms of the disease called scurvy. So they think, "I stopped my vitamins, obviously, I better get back on them." They take extra vitamin C again and instantly their vitamin C level is back up to where it used to be and they feel good.

Their conclusion is that we do not know what we are talking about with regards to vitamin C or other supplements. They say, "I laid off my vitamins for one week and I really felt lousy and as soon as I began taking them again I felt wonderful. Obviously, these

vitamins (or supplements) really are good for me."

It is interesting how we fail to remember the good health we had for years before we ever started taking these nutritional supplements! Did we really feel like we had scurvy for all those years before we started the vitamin C megadoses? We have forgotten that we actually felt fine for all those years at least as far as vitamin C was concerned.

Our body levels of vitamin C used to be just fine. When we started taking the extra 1000 mgs, our levels actually fell down a little bit, but we did not feel the difference. However, the difference was very apparent when we quit. At that point, we got to feeling bad and as soon as we started taking the supplements again, we quickly got to feeling better.

It is then that we become a walking advertisement for the selling of vitamin C and other supplements. We can not wait to tell others about the great benefits of dietary supplements.

Let's say that we decide to stick it out and not go back to the megadosing of vitamin C. How long is it going to be before our body adjusts to our new lower vitamin C intake and our body tissue levels get back up to normal again? As with many other bodily processes it takes about four to six weeks before our body re-adjusts to the drop in vitamin C intake and the tissue levels get back to normal.

While our body can readily get rid of the water-soluble vitamins, like vitamin C, there is even a greater risk to our health when we ingest large doses of the fat-soluble vitamins. These vitamins (A, D, E, K) are efficiently stored in our fat tissues and can

thereby more easily build up to toxic levels. For these vitamins, we do not really know how much we need to be in the best of health. Like vitamin C and other nutrients, it is much safer simply to take in what God has provided for us from His food.

The above discussion is not only true for vitamin C, but in many respects, is also true for all the other vitamins and nutrients in our food that we might think of taking in the form of nutritional supplements.

The use of supplements begs another question: do vitamin and mineral supplements actually increase one's lifespan? Happily, they now have been around long enough for us to have a statistical answer to this question. An extensive research study recently reached this conclusion: "We found no evidence of increased longevity among vitamin and mineral supplement users in the United States."

Therapeutic Benefits

There are times when it is both appropriate and beneficial to use specific vitamins, minerals, and even herbs to assist the body in the healing process. For instance, we might take vitamin C for canker sores with good benefit. However, this does not mean that we should recommend that everyone here today take supplements of vitamin C routinely. Notice the chart

below, which lists just a few of the many problems associated with excessive vitamin supplementation.

Then there is the effect on our future behavior. If the supplement confers some temporary relief, it may serve to diminish our interest in searching for the underlying cause of the problem (i.e. canker sore). We might thereby never discover that an improved diet

might prevent the problem from occurring in the first place!

Of course, there are illnesses, like pernicious anemia, in which one does not adequately absorb vitamin B12. In this case, routine monthly injections of this vitamin are absolutely necessary. While it is essential for such an individual's best health, this does not mean that everyone should come in for a monthly B12 injection.

DANGERS OF TAKING EXCESSIVE WATER-SOLUBLE VITAMINS

<i>Vitamin Supplement</i>	<i>Disorder</i>	<i>Effect</i>
• Niacin	heart rhythm problems peptic ulcer disease liver disease gout diabetes diarrhea	
• Folic acid	pernicious anemia	masks B12 deficiency
• Vitamin B6	nerve problems Parkinson's kidney problems	potentially irreversible neuropathy
• Vitamin C	diarrhea vitamin dependence	kidney stone formation Vitamin C deficiency if supplement is decreased

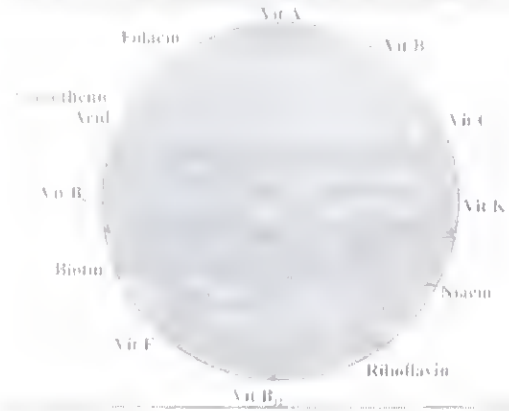
Nutrient Interactions

Another concern regarding the practice of routinely taking vitamin and mineral supplements has to do with the interactions that they have upon one another. Surprisingly, we can cause ourselves to suffer a vitamin or mineral deficiency by taking large doses of supplements.

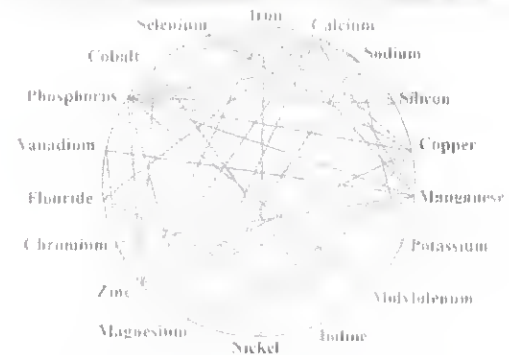
How can such a thing happen? The answer lies with an understanding of the myriad of interactions that occur between vitamins, minerals and other nutrients. Taking excessive amounts of one vitamin or mineral often results in a change in the rate of absorption and utilization of other vitamins and minerals. For example, if we take in large doses of vitamin C day after day, our body will increase its absorption of iron, which can cause several health problems. Interactions of other substances may cause a decrease in the absorption of another substance. Furthermore, not only do vitamins and minerals interact, but also vitamins can interact with other vitamins, and minerals can interact with other minerals, and even with trace elements, as illustrated in the figures located to the right.

Without question, all of these vitamins, minerals, and trace elements confer many beneficial effects to us. However, these benefits are negated (or worse) if a nutrient is not consumed in the right balance or quantity with all other nutrients. We require the proper ratio of one nutrient to the next and nature provides this all important balance. The complexity of nature's provision defies duplication. Yes, it is much better to receive these many benefits by way of the daily intake of good food rather than the chronic usage of nutritional supplements.

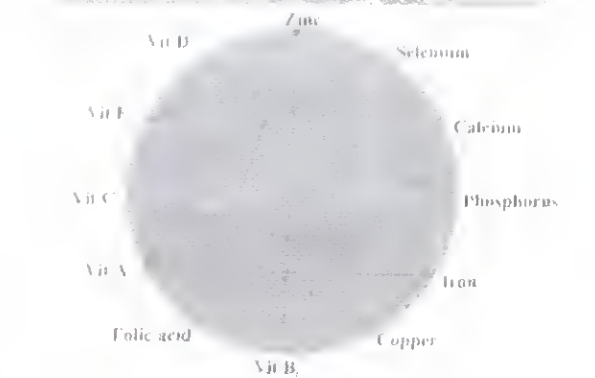
VITAMIN INTERACTIONS



INTERACTIONS BETWEEN ESSENTIAL MINERALS AND TRACE ELEMENTS



VITAMIN - MINERAL INTERACTIONS



Free Radicals, Oxidation, Antioxidants, and Aging

Let's briefly comment on the concept of free radicals and antioxidants, so that we may better understand the importance of vitamins, minerals, and phytochemicals. Remember our earlier discussion on the effects of oxidation on the vitamin C content of food. Interestingly, our bodies' age by way of the same process that causes a piece of fruit to spoil or a piece of metal to rust. Free radicals are the villains causing the oxidation, the rust, as well as the aging process. Amazingly, we are ever more understanding how our foods can inhibit and prevent the formation of these life-destroying chemicals!

Normally every molecule has electrons that are in orbit around its nucleus. Those electrons normally come in pairs, and render the molecule chemically stable. However, a free radical is a molecule that has an unpaired electron. This leaves it extremely unstable. It has a powerful drive to acquire an electron to pair with the one that lacks a partner. Often within a fraction of a second,

a free radical will grab an electron from a neighboring compound. That neighbor, who lost an electron, is said to be "oxidized." Furthermore, the oxidized compound itself typically becomes a free radical. Since it is now missing an electron, it has a strong desire to grab one from its neighbors—and it usually does so in short order. The result, then, is a chain reaction, where oxidation and damage can spread from one molecule to the next until something stops the process. Molecules that can stop this chain reaction are called antioxidants, which restore the unstable molecules to a chemically stable condition.

There are things we can do to limit our exposure to free radicals (notice the chart above). However, because all living creatures produce them, we cannot completely avoid these highly reactive compounds. Therefore, we need to strengthen our antioxidant defenses in addition to avoiding free radicals.

How can we most effectively obtain these antioxidant defenses and therefore limit disease and aging? Should we find the most potent antioxidant nutritional supplements or is there a better way?

A recent research study helps us to answer this question. We now know the many beneficial effects of vitamin E on our heart, blood vessels, and other tissues. This research indicated that we can get an antioxidant benefit equivalent to 1100 IU of vitamin E by eating one cup of the cooked green leafy vegetable kale. What is so strange about this

SUMMARY LIST OF CANCER-CAUSING AGENTS

Tobacco	Eggs, milk, cheese
Alcohol	Saturated fat
Excess Fat	Toxins
Meat:	Viruses
Saturated fat	Coffee
Nitrosamines	Excess sun exposure
Excessive iron	Asbestos
Toxins:	Wood dust
Benzopyrene	Excess sugar in the diet
(from cooking)	Genital powder and genital
PCB, DDT, DDE	deodorant sprays

finding is that kale only contains 13 IU of the antioxidant vitamin E. How is this possible? Well, kale accomplishes this feat due to its abundance of other antioxidants, giving it the health promoting power equal to 1100 IU of vitamin E, without exposing us to the risks of this high dose of vitamin E. Now we understand why whole natural foods are found to have relatively small amounts of individual vitamins and minerals.

There are many studies reporting the beneficial effects of various nutritional supplements on diseases such as cancer, heart disease, and birth defects among others. What is to be made of these reports?

A recent study sponsored by the government answers this question quite well. Some studies have indeed indicated that those who take a vitamin E supplement of 400-800 I.U. per day are half as likely to suffer heart attacks as those who took a placebo (inactive look-alike). A further study sought to investigate this claim and evaluated 34,000 women (that's a lot) who ate a diet rich in vitamin E. They ate oil-rich nuts, seeds, and fruits such as avocados, as well as vegetable oils, and this diet helped lower their risk of death from heart disease by more than 60%. However, those who got their vitamin E through supplements, in this study, were found to have experienced no diminished risk of heart disease.

The researchers concluded that although there are potential side effects from supplements, the major danger in the group taking

the vitamin E supplement was that they felt free to indulge their bad habits!

A Finnish study of nearly 30,000 male smokers had an even more startling result. These researchers found that taking beta-carotene pills for up to eight years actually increased the risk of lung cancer by eighteen percent. Beta-carotene, like many antioxidants, can actually increase free radical production when consumed in large amounts by itself. However, when beta carotene is combined with adequate vitamin C, vitamin E, and other antioxidants, such as is found in beta carotene rich natural foods, a potent antioxidant effect occurs.

Yes, fruits and vegetables have powerful antioxidant effects that exceed expectations based on their vitamin content. Other naturally occurring chemicals in plant foods like the phytochemicals provide further additive benefit to the vitamins. All the foods, on the chart above, contain an abundant supply of antioxidants, shown to destroy cancer cells in the laboratory.

CANCER-PROTECTIVE FRUITS AND VEGETABLES	
Fruits	Vegetables
<ul style="list-style-type: none"> • blueberries • strawberries • plums • oranges • grapes • citrus fruits • apricots • orange juice • grapefruit • kiwifruit • raspberries • blackberries • bananas 	<ul style="list-style-type: none"> • kale, spinach • lettuce, collard greens • brussel sprouts, cabbage • broccoli, cauliflower • carrots, beets, potatoes • watercress, mustard greens • garlic, onions, leeks • turnip/turnip greens • tomatoes • yams, sweet potatoes • mixed vegetables • pumpkin • cantaloupe, watermelon • bell peppers

Phytochemicals

These are naturally occurring chemicals only found in plant foods. There are literally thousands of phytochemicals, many of which appear to have a role in fighting cancer. Scientists are just beginning to appreciate many of these chemicals.

The figure, to the right, lists a few phytochemicals (and the foods that contain them), which are proven to prevent, and even treat cancer in the laboratory.

Science has also proven that eating an abundance of fruits, grains and vegetables can actually add years to our life. Studies suggest that a vegetarian diet may extend our life by more than a decade over that which we could expect on a heavy meat, plant-poor diet.

It is obvious that the foundation for nutritional health does not lie with vitamin and mineral supplementation. It rests with a diet based on an abundance of fruits, grains, and vegetables. Not only do these food choices provide the benefits of the vitamins and minerals that we know about, but they also provide a host of factors that have not yet been discovered. If we are on a supplement program, we better learn to be patient. For we will have to wait for scientists to discover more of the healthful compounds in plant foods; learn how to make or isolate them in the lab; and then finally put them into supplements for commercial sale!

On the other hand, if we are

eating fruits, vegetables, whole grains, nuts and seeds, in moderation, then we will be getting all of the hottest protective phytochemicals (plant chemicals) before they are even discovered!

FOOD SOURCES OF CANCER FIGHTING PHYTOCHEMICALS	
Phytochemical	Foods
Snigirin	Brussel sprouts
Sulphoraphane	Broccoli
Dithiolthiones	Broccoli
Resveratrol	Red grapes
PEITC	Watercress
Limonene	Citrus fruits
Allyl sulfides	Garlic, onions, leeks
Isoflavones, Saponins	Soybeans, legumes
Protease Inhibitors	Soybeans, legumes
Ellagic Acid	Grapes
Caffeic Acid	Fruits
Phytic Acid	Grains

Some Sources of Selected Nutrients

Nutrient	Source
Vitamin A	Dark green, yellow, and orange vegetables and fruit
Vitamin B	Whole grain products, peas, beans, wheat germ, potatoes, and leafy vegetables.
Vitamin B ₂ (Riboflavin)	Green leafy vegetables, whole-grain products, prunes, and milk (nonfat).
Vitamin B (Riboflavin)	Whole grain and enriched breads and cereals, legumes, potatoes, and green vegetables.
Vitamin B ₁₂ (Niacin)	Dairy products (nonfat), soy sauce, enriched commercial products, certain cereals, milk substitutes, etc.
Vitamin C	Cantaloupe, lemons, grapefruit, oranges, strawberries, raw cabbage, sweet peppers, tomatoes, and potatoes.
Vitamin D	Direct sunshine and fortified milks.
Vitamin E	Whole grains, leafy vegetables, dairy products, and sunflower seeds.
Iron	Legumes, whole-grain cereals and breads, dried fruits, and green leafy vegetables.
Calcium and Phosphorus	Mustard, kale, turnip tops, cabbage, broccoli, whole-grain products, citrus fruits, and skim milk.

Nutritional Supplements

NEVER BEFORE has something we need so little of been sold so big – \$20 + billion dollars big!

Conclusion

What may we conclude from this discussion on nutrition supplements?

1. By eating an unrefined diet, with plenty of foods as grown, we can be confident, we will obtain an appropriate quantity and variety of health promoting vitamins, minerals and other essential nutrients.
2. Vitamin, mineral, and other 'nutritional' supplements as well as juicing are alterations of the Creator's provision based on the false premise that more is better and that disease is caused by nutritional deficiencies.
3. Herbs, being whole foods, are health-promoting, both when added routinely to our meals and when employed as nature's true, safe and effective medicinal healers.

The Lord might say it this way:

“As I bless your efforts, your body has the ability to prevent and reverse many diseases ... if you provide it with whole-food nutrition.”



God's Diet

Before the creation of human beings, God prepared an ideal home environment for Adam, Eve, and their descendants. God wished the human race to live happily and healthfully in the Garden of Eden. In this ideal environment, God provided our first parents with the very best food.

The Lord instructed Adam and Eve that "every herb that yields seed which is on the face of all the earth, and every tree whose fruit yields seed; for you it shall be for food." (Genesis 1:29). They could also enjoy the fruit from the Tree of Life.

So then, before sin entered the world Adam and Eve ate the products of plants and trees, that is, grains, nuts, and fruits. Examples would include wheat, rice, barley, walnuts, almonds, apples, pears, bananas, tomatoes, eggplant, watermelon, pumpkins, squash, and mangoes. Following the entry of sin, God modified the diet to include the plants themselves, or vegetables, such as cabbage, lettuce, celery, rhubarb, broccoli, cauliflower, carrots, turnips, and beets. Clearly, God's original diet for us was a vegetarian diet.

As modern scientific research has revealed the diet provided by God at the

beginning of life on this planet was designed to best meet the needs of human beings.

"No good thing will He withhold from them that walk uprightly." (Psalm 84:11). Modern science has validated that a plant-based diet that is modest in fat and protein, high in vitamins, minerals, and fiber, rich in starch and contains a variety of other active substances (called phytochemicals) dramatically improves ones health and longevity.

Such a diet:

- lowers blood cholesterol levels when high
- dramatically reduces the risk of heart disease and stroke
- lowers blood pressure when high
- improves and often cures adult onset diabetes
- helps cure overweightness
- reduces the risk of osteoporosis
- dramatically reduces the risk of adult cancers
- improves or cures constipation
- enhances vigor and endurance
- lengthens the lifespan

Change Permitted

The book of Genesis records that after the worldwide flood in Noah's day, God allowed for the consumption of animal food. However, this permission was not an open ticket. It came with two restrictions.

The first restriction was that flesh must

be eaten without the blood. "But flesh with the life thereof, which is the blood thereof, shall ye not eat" (Genesis 9:4). This was again emphasized in the New Testament. "But that we write unto them, that they abstain from pollutions of idols, and from

fornication, and from things strangled, and from blood" (Acts 15:20).

The second restriction was that the meat must be eaten without the fat. "This shall be a perpetual statute throughout your generations in all your dwellings: you shall eat neither fat nor blood." (Leviticus 3:17).

The common use of animal fat has been blamed for much of the high rates of heart disease and cancer in Western society today. The blood of an animal carries much of the waste products, hormones and infectious agents of the animal. Consumption of the blood of an animal increases the risk of contracting disease from the animal.

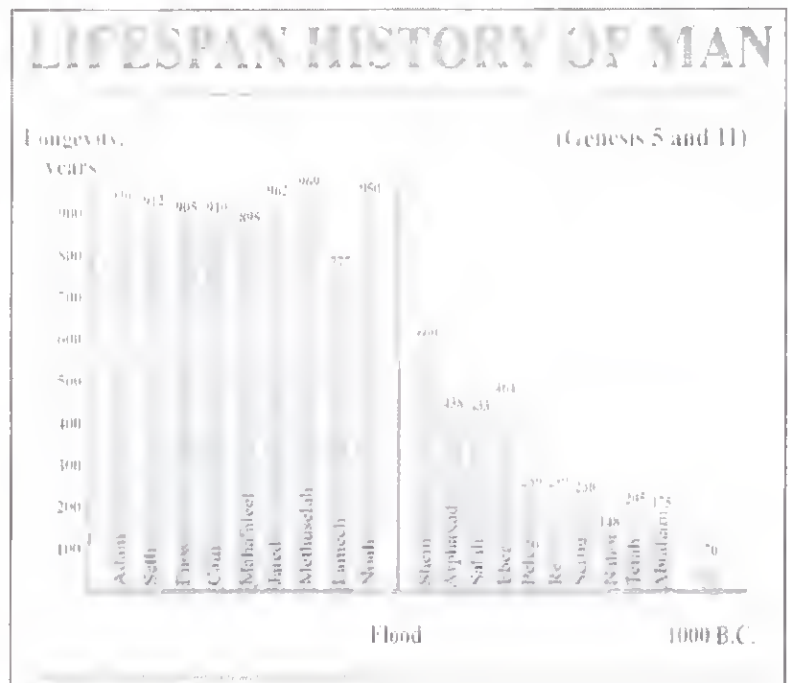
When the Israelites left Egypt and journeyed to the Promised Land (Canaan) they had to travel across the deserts of Arabia. When they ran out of food that they had carried with them from Egypt, God provided a non-flesh diet of His own choosing. He gave them manna or "bread from heaven" (Exodus 16:4). However, because of their complaints, and their craving for the "flesh pots of Egypt" (Exodus 16:3), God gave them quails for a period of about one month (Numbers 11). They paid dearly for turning their back on God's provisions (the manna) as many died as a result of consuming quail meat.

A Closer Look

Before the Flood, when God's people lived on a non-flesh diet, they lived almost 1,000 years. Their "generation age" or age at the birth of their first child was around 100 years. Following the flood, when animal flesh was permitted in the diet (a diet high in animal fat and animal protein), two things happened: the lifespan rapidly decreased to about 175 years, while the generation age dropped to about 30 years (Gen. 5 to 11).

After the flood, God permitted His people to temporarily include flesh in their diet. However, a taste for meat was quickly acquired and its flavor and stimulating properties soon made it a staple in their diet. Meat has remained a primary staple

in the diet of affluent people to the present time. Notice the changes in the life span of man over his first 3000 years.



Christ's Advent

At the first Advent of Christ, John the Baptist preached a message of reform. His life-style and diet were very simple. He was a vegetarian. His plant-based diet of locust beans and wild honey was low in fat and high in fiber, a diet that science has now revealed to be associated with the best health.

Now Jesus called him "the greatest prophet that ever lived." (Luke 7:28) Inspiration informs us that "Not Enoch, who was translated to heaven, not Elijah, who ascended in a chariot of fire, was greater or more honored than John the Baptist, who perished alone in the dungeon" (The Ministry of Healing, p.478). John the Baptist had the weightiest responsibility on his shoulders of any prophet who ever lived, because he had to prepare the way for the first coming of Jesus. The people had to get ready and John's message was repent because the kingdom of God was at hand.

In order to be the very best prophet, he found it necessary to be disciplined when

it came to the care of his body as well as his mind and spirit. To accomplish these goals he got plenty of sunshine, fresh water, exercise, and he was a vegetarian. Now many today talk about the soon coming of Jesus. Well, if that is true then it certainly seems reasonable to consider John the Baptist as an adequate role model for us. We ought to be disciplined in our minds, our spirits, and our bodies. We ought to get our fresh air, our exercise and eat a proper diet, because that will give us the kind of health and physical and mental endurance that we need in the days to come.

The apostle Paul likens the Lord's followers living at the end of time to the Israelites as they journeyed from Egypt to the Promised Land. He urged a change in lifestyle and warns God's people today not to repeat the failures of ancient Israel and lust after the flesh foods of Egypt. "Now all these things happened unto them for ensamples (examples): and they were written for our admonition, upon whom the ends of our world are come" (1 Corinthians 10:11).

Summary

We would do well to return to God's original diet, the diet of our first parents. Such a diet, in conjunction with regular exercise in fresh air and sunshine, plenty of water, adequate rest, avoidance of harmful substances (caffeine, alcohol, tobacco), and trust in God, supports a premium quality lifestyle and promotes a long life. More importantly, it increases our sensibilities to the voice of God, increases our resistance to the power of sin and assists us in our preparation to meet the Lord in peace. In the earth made new, we will enjoy the plants of the field and partake of the life-perpetuating fruit of the Tree of Life and then we will more fully reveal the character of our Creator.

Foundational Principles for Health Reform from the Scriptures

1. **God is as interested in our physical health as our spiritual health.**
*"Beloved, I wish above all things that thou mayest prosper and be **in health**, even as thy soul prospereth."*
3 John 2

2. **We can eat and drink in a manner that brings glory or dishonor to God.**
*"Whether therefore ye **eat**, or **drink**, or whatsoever ye do, do all to the glory of God."*
1 Corinthians 10:31

3. **Temperance (self-control) is as important as righteousness (right-doing) and judgment (God's character vindicated).**
*"And as he reasoned of righteousness, **temperance**, and judgment to come, Felix trembled, and answered, Go thy way for this time; when I have a convenient season, I will call for thee."*
Acts 24:25

Temperance (self-control) is one of the fruits of the Spirit (Galatians 5:22, 23) and one step on the ladder of Christian progress (2 Peter 1:5-7).

4. **We can be lost if we allow our appetite to control us.**
*"But I keep under **my body**, and bring it into subjection: lest that by any means, when I have preached to others, I myself should be a castaway."*
1 Corinthians 9:27

5. **If we knowingly injure our body we will be lost.**
*"Know ye not that **ye are the temple of God**, and that the Spirit of God dwelleth in you? If any man defile the temple of God, him shall God destroy; for the temple of God is holy, which temple ye are."*
1 Corinthians 3:16, 17

*"What? know ye not that **your body is the temple of the Holy Ghost** which is in you, which ye have of God, and ye are not your own? For ye are bought with a price: therefore glorify God in your body, and in your spirit, which are God's."*
1 Corinthians 6:19, 20

6. **Gluttony (overeating) dulls our spiritual perceptions.**

*"And take heed to yourselves, lest at any time your hearts be overcharged with **surfeiting** (overeating), and **drunkenness** (irresponsible eating), and cares of this life, and so that day come upon you unawares."*

Luke 21:34

7. **Gluttony is a sign of the lost.**

*"For they that are such serve not our Lord Jesus Christ, but their **own belly**; and by good words and fair speeches deceive the hearts of the simple."*

Romans 16:18

8. **Gluttony is a sign of the end of the world.**

*"Likewise also as it was in the days of Lot; they did **eat**, they **drank**, they bought, they sold, they planted, they builded; But the same day that Lot went out of Sodom it rained fire and brimstone from heaven, and destroyed them all. Even thus shall it be in the day when the Son of man is revealed."*

Luke 17:28-30

(Also Matthew 24:37-39)

9. **An unrepentant glutton is worthy of death.**

*"If a man have a stubborn and rebellious son, which will not obey the voice of his father, or the voice of his mother; and that, when they have chastened him, will not hearken unto them: Then shall his father and his mother lay hold on him, and bring him out unto the elders of his city, and unto the gate of his place; And they shall say unto the elders of his city, This our son is stubborn and rebellious, he will not obey our voice; he is a **glutton**, and a **drunkard**. And all the men of his city shall stone him with stones, that he die; so shalt thou put evil away from among you; and all Israel shall hear, and fear."*

Deuteronomy 21:18-21

*"And put a knife to thy throat, if thou be a man given **to appetite**."*

Proverbs 23:2

10. **And also worthy of the second death (Hell).**

*"Whose end is destruction, whose **God is their belly**, and whose glory is in their shame, who mind earthly things."*

Philippians 3:19

The Addiction Carousel

In the course of trying to change our diets, we often get stuck. There are certain foods, from which we have particular difficulty breaking away. And almost inevitably, we start blaming ourselves. It's my weak will, it's my oral personality, I was dropped as a child, my job and/or family is dysfunctional in some way or the like. Sadly, many are so discouraged that they give up the fight and resign themselves to the inevitable consequences of their poor diet. Our dietary habits have power over us in ways we have never known. Let's take a look at **The Addiction Carousel**.

Let's look at some of the latest research in the field of food science. Nutritional research is giving us new and fascinating insights into the power of food and its effects on our minds. This research helps us to better understand how food impacts not only our body and mind but also our spiritual health.

As we begin, let's consider a few questions and maybe benefit by having these thoughts percolating in our minds during the discussion to follow?

- Can salvation be lost by one who refuses to keep God's commandments? [That is, refuse to do His will? (Psalm 40:8)]
- Can salvation be lost by one who refuses to keep God's health message?
- If yes, is that person lost by an act of God or rather the natural laws of nature?

We have in the past discussed the close connection between our dietary habits

and our physical health; that is, that certain food choices consistently lead to improved health and longevity, whereas others lead predictably to disease and a shortened life.

How about the effect of food on our behavior and our spiritual health? Can our dietary habits also lead us in a predictable fashion towards certain activities and thereby impact in a positive or negative manner our spiritual health? How fascinating and novel, in our society, to consider whether our spiritual health is also closely affected (even determined?) by our dietary choices. And if this is so, how does it work? Can food actually predispose us to sin? Wow. Now there is a question!

The close connection between the physical and spiritual realms was no doubt in the apostle's mind as he wrote 3 John 2. Notice here that he elevates the physical to the level of the spiritual in terms of importance. We are thus invited to consider how the former impacts the latter.

The power of food and our appetite! The power to determine life or sickness today, but also, we believe, the power to determine eternal life or eternal loss. Part of this power resides in the fact that we do not understand the nature of our food; how does food affect us? Are certain foods addictive? Can they really affect our ability to

"Beloved, I wish
above all things that thou
mayest prosper and be in
health, even as thy soul
prospereth."

3 John 2

choose right
from wrong?
Come, and let
us reason this
out together,
shall we
(Isaiah 1:18).

Yes, we have an "it is written." Genesis 1:29, and 3:18 say "fruits, grains, vegetables and nuts; they shall be your food." Science and inspiration deliver the same message

of a simply prepared, unrefined diet. Yet, to help us as we desire further understanding on why food is so important, today we will study how food affects our mind and spirit

Nutritional Science

Let's begin with an interesting study involving babies. Researchers at the University of Massachusetts pioneered this peculiar sort of experiment, which revealed that the power of food can be demonstrated from our earliest ages.

In this study, they took a baby, 9-12 weeks of age, and had an adult sit face-to-face with them. The adult then placed a pacifier, dipped in sugar water, in the baby's mouth. Then, after waiting 3½ minutes they left the room and soon returned with a dozen other adults only to find that the baby now had eyes only for the one whom had just given them the sugar-laced pacifier. The baby was magnetized!


What happened was that the taste of sugar on the tip of the baby's tongue triggered a nerve impulse. This impulse traveled to the base of the baby's brain, where opiate chemicals (called endorphins) were released inside the brain. These endorphins in turn (like dominos) knocked over the next domino in the brain, which was dopamine. Dopamine is the primary feel good chemical in a baby's brain, as it is in our adult brains. This whole

cascade of activity was triggered with just a little sugar water on the pacifier. Will we ever look at an innocent looking soda pop the same?

Now a baby is naturally able to detect

sweet tastes. Since breast milk is very lightly sweet to the baby's tongue, nature allows the baby to enjoy this small dose of sugar so that feeding might be especially attractive to the baby. Well, sucrose or white table sugar is much sweeter and triggers an exaggerated response, which effectively drugs the baby. This has a lot of practical value for grandparents, aunts or uncles. But the issue for today is the response elicited, not just in a baby, but also in us big folks by the foods we commonly


How to Magnetize a Baby



Baby, 9-12 weeks of age
Sit face-to-face, 15 inches apart
Mix 1 tsp sugar in 1 cup water
Dip pacifier in sugar water and place in baby's mouth
Look at baby for 3 ½ minutes, then leave room
Return in 10 minutes with a dozen other people

How to Magnetize a Baby

Sugar \Rightarrow opiate release \Rightarrow \uparrow dopamine
(endorphins)



Dopamine
the primary "feel good" brain chemical

Sugar

- Reduces crying in healthy newborns
- Reduces visible reaction to heel-stick and circumcision
- Has no effect in infants of opiate-addicted mothers

enjoy. Obviously, we do not generally place a sugar-laden pacifier in our mouths (or do we?), but we do get our sugar in different ways and we get our own reactions to it.

Consider some other effects of this cascade of activity from sugar on the tongue. For instance, if we dribble a little sugar into a baby's mouth they do not cry as much and their reaction to having blood drawn from their heel or performing a circumcision is significantly less. We are not necessarily recommending this, but we're simply showing that sugar has a drug like effect.

Researchers at Johns Hopkins University in Baltimore tested sugar's effects in an unusual way. When babies lying in their bassinets would begin to whimper, they gave them either a tiny amount of sugar in water or else just plain water, dribbling the fluid into the baby's mouths with a plastic syringe. The effect was almost immediate. Sugar-water stopped them from crying. Water alone did nothing.

A pacifier can do this too but there is a critical difference. If the pacifier is removed, crying usually ensues immediately, but sugar's effects linger for several minutes, even after the taste is gone. The reason is that sugar causes opiates to be released in the infant's brain, and these naturally calming compounds stay on after the sugar is gone.

Infants whose mothers were narcotic addicts during pregnancy react very differently. Sugar is useless. They cry whether they get sugar or not. The fact is, these babies were exposed to narcotic opiates in the womb, and their natural opiate circuitry no longer responds normally; they are resistant to its effects.

Hospitals have taken advantage of sugar's opiate action. As we mentioned already, when a baby's blood samples are drawn by a typical heel-stick, a little sugar given in advance has a noticeable calming effect. The same is true during circumcision. The pronounced attraction that sugar has for children suddenly starts to make sense.

Sugar causes the release of opiates within the brain. But that opiate response does more than make us feel good. It also has a marked appetite-driving effect. We have all experienced it. We had a little bit of an appetite before we took our first bite of sugar. Might taste good, we thought. But once it touches our lips, sugar's opiate effects break through the dam holding back our appetite and we are swept away. Inside our brain, the opiates triggered by the sweet taste are busily resetting all our internal priorities to make us care about one thing and one thing only: eating more of what has just passed our lips.

This last observation has nothing less than monumental ramifications as we consider the epidemic of physical and mental diseases in our country. Many of these conditions are secondary to chemical imbalances (e.g. dopamine) in the brain. Of course there are many foods that are both high in sugar and associated with the best of health.

What is the story about that?

As we have previously discussed, there is a great level of confusion when it comes to carbohydrates. There are literally millions of people who are heard to say, "Well, I'm addicted to carbohydrates. I just can't avoid all those starches." This is actually not the whole truth. Yes, it is

true that refined carbohydrates are indeed unhealthy (and tonight we will consider their addictive qualities). However, unrefined carbohydrates (e.g. fruits, vegetables, breads, pasta, etc.) are the foods associated with the healthiest of lives. The common deceptions of our day are often based on a lack of understanding on the nutritional difference between these two types of carbohydrate-rich foods.

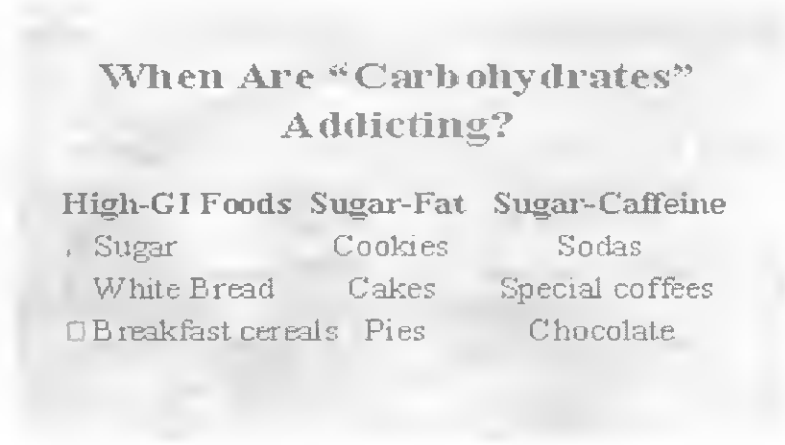
So what are we addicted to? What the “carbohydrate addicts” are really hooked on are the processed foods, which have had the fiber removed (nature always, without exception, packages sugar with fiber). In essentially every case, the carbohydrates people crave are those that are either loaded with sugar, like doughnuts and cookies, or that rapidly disintegrate into millions of sugar molecules that rush into the blood stream during the process of digestion. Unrefined carbohydrate-rich and fiber-rich foods are different. Yes, they will eventually release sugars in the course of digestion, but they do so slowly, in precisely the form our body uses for energy.

Notice the three categories in the diagram above. We are addicted to carbohydrates if it is sugar itself (simple sugar), which is the simplest form of carbohydrates. As well as those carbohydrates that break into sugar very quickly (high glycemic index (GI) foods). These would include white

bread and breakfast cereals. Then we can also get hooked on sugar-fat mixtures; like cookies, cakes, or pies. And the third category, which is the sugar-caffeine mixtures; like sodas or these new special coffees (lattes) that seem to be everywhere. Finally, of course, we have chocolate, which contains both sugar and caffeine.

Let’s review, again, the chemical pathway that drives the sugar addiction because as we will see it is the same pathway the drives all the issues to be discussed tonight.

There are several ways that sugar works on our brain. First, sugar triggers the release of natural opiates within the brain, just as chocolate does. Our brain cells have tiny molecular structures on their surface called opiate receptors. When we exercise vigorously, our natural endorphins attach to these receptors, where they act as painkillers and cause the famous “runner’s high.” Endorphins are cousins of morphine and heroin in their chemical structure, but milder in their action, and they activate the dopamine system within the brain’s pleasure center. Whether endorphins are released by exercise or by the taste of sugar, the result is a pleasant “feel-good” effect.



The All-American Beverage

Consider the innocent looking can of soda. A typical 20 oz. bottle, which is the size that is most commonly sold today, has about 68 grams of sugar, 78 mg of caffeine (which is almost as much as a cup of coffee) and about 250 calories.

Now when I was a kid growing up we had 6 ounce bottles of cola. And we only had them on special occasions. It was not a daily sort of thing. When we were at school, we didn't have a soda machine. After our gym classes we would line up at the water fountain. That was the beverage that we used. And I remember my sisters and mother saying, "You know we have these twelve ounce cans now and I can not finish the whole thing." And they would look around for some kind of stopper to save it for the

next day.

Well,

serving
sizes went
up to 16
ounces to
20 ounce

bottles (and now 64?! ounces) and it is fair to say that no one is saving half for the next day!

What we are saying is that we are using this substance rather like an addictive drug, where we are seeking out our dose, and then, like an addict, using it daily.

So are these refined sugars a problem? Well, if we have them once in a while, it is hard to say that they are a problem. But if we are routinely (meaning daily) eating or drinking these types of foods, then we should consider that two chocolate chip cookies have 90 calories, a soda has 250 calories, and a small bag of twizzlers has 263 calories. Furthermore, only an extra 50 calories a day equals to an extra five pounds of weight for the year. The benefit of breaking the sugar addiction becomes obvious.

Coca-Cola (20 oz.)

**68 grams sugar
78 mg caffeine
250 calories**

Is Sugar a Problem?

	<u>Calories</u>
Sugar, 1 teaspoon	15
Chocolate chip cookies (2)	90
Soda, 20 ounces	250
Twizzlers (2.5 oz.)	263

Hand over the Chocolate and no one will get hurt!

What is it about chocolate? Over the past few years some very interesting research has been done revealing the addictive qualities of this most popular of culinary delights. These studies involved a drug most commonly used in our emergency rooms (ER), called nalazone (narcen). When a person has overdosed on heroin or another narcotic medication the ER staff will administer this drug through an intravenous line. In so doing, the effects of the narcotic drug are blocked and the patient's condition improves. The opiate receptors in the

brain are blocked and they wake up. Narcen attaches itself to the opiate receptors and does not allow the opiate drugs to work.

Repeat the last sentence again and keep it in mind as we proceed. Now, if we take a chocolate addict and we use this very same drug, which blocks their opiate receptors, chocolate becomes like dry bread! They will eat it if they are hungry, but they will not overdose on it, they will not binge on it, and they will not knock over a convenience store late at night to get it. They will not plug quarters into a candy

machine with that mixture of humiliation and regret that folks feel over any kind of addiction. This drug blocks their opiate (nee chocolate) receptors!

Now we are not suggesting this as a treatment. But rather that this is a fantastic research tool revealing that it is not really the taste, but it is the brain effect that counts. Chocolate, just like sugar, elicits an opiate reaction within the brain that trips those dopamine receptors that gives us the pleasure response!

Moreover, as we previously mentioned, if we open up a box of chocolate chip cookies and we have just one, about five minutes later our hand hits the bottom of the bag. We did not intend that to happen. Yet, the opiate trigger also stimulates the appetite a little bit. So if we weren't terribly hungry before, we will be once we start. We have all experienced this truth, haven't we!!! These foods, like sin in general, are stronger than we ever thought.

At the University of Michigan, researchers studied the effect of Narcan blockade on our desires for many of our common snack foods. Volunteers were offered a tray filled with snicker's bars, M & M's, chocolate chip cookies, and oreos. Normally these snacks would have quickly disappeared, but the drug knocked out the desire for chocolate.

Notice the results to the right. They found no obvious opiate effect with breadsticks, corn chips, jelly beans, popcorn, or saltines. But they did with chocolate chip cookies, Jell-O, marshmallows, potato chips, and pretzels. And they found a significant opiate effect with Lorna Doones, M & M's, Oreos, Snickers bars, and saltines with jelly.

So again, what we are suggesting is, it is not just weak will or these sorts of things. It is a chemical effect of foods. By the way, compulsive gamblers, alcoholics, drug abusers, smokers, and thrill seekers in general are all

The Chocolate Drugstore

Caffeine (5-10 mg)*

Theobromine

Phenylethylamine

Slows breakdown of anandamide

*Compare to coffee (100 mg)

found to respond to narcan. That means that a significant cause of the above behaviors maybe the over stimulation of their brains with (refined carbohydrates or) opiate activity.

Chocolate has far more theobromine than caffeine. This "food of the gods" is a stimulant similar to caffeine in structure and effect, but milder. This is the reason that chocolate is a problem for our dogs because they can not readily break down theobromine and it therefore can damage their hearts, kidneys and nervous systems.

Phenylethylamine is an amphetamine-like chemical (again also a stimulant). Though only one tenth the amount found in cheese or salami. Additionally, our brains normally produce a chemical called anandamide, which is related to tetraacannabinol (THC), the active ingredient in marijuana. Chocolate has chemicals that delay the break down of this substance.

So the bottom line is, chocolate is not just a single drug-like compound, it's basically the whole drugstore: traces of mild opiates, caffeine, amphetamine-like components, and the equivalent of a slight whiff of marijuana, all wrapped into a smooth, sweet taste.

Opiate Effects of Snacks

None	Mild	Significant
Breadsticks	Chocolate Chip cookies	Lorna Doones
Corn chips	Jell-O	M & M's
Jelly beans	Marshmallows	Oreos
Popcorn	Potato chips	Snickers
Saltines	Pretzels	Saltines with jelly

Ah, the power of _____!

But wait we haven't got to the big one yet. Are we ready? What food is possibly the toughest to give up? Do we recognize the latest advertisement from Madison Avenue in the phrase above?

There was a recent research study with 59 post menopausal women who went on a total vegan diet. After 14 weeks, they were asked, "what are you missing the most?" They did not have any meat, dairy, eggs, and very little vegetable oils. When they were asked what they really missed, they did not especially miss ice cream, they did not miss a cold glass of milk with Oreos. What they really missed more than anything else was, surprisingly enough, cheese.

When people try to eat healthy this is the one food that is hard to forget. The thought of it lingers on in the mind. People wake up at 4:30 in the morning dreaming about cheese pizza with those malty strings coming on down. Why is that?

Here is an amazing truth!

As we attempt to answer this question, we are drawn back to 1981, when a scientist Eli Hazum and his colleagues at Wellcome Research Laboratories reported a remarkable discovery. They discovered a substance in cow's milk that looked very much like morphine. There was not a lot of it. But they did a lot of tests and found out eventually that it did not just look like morphine, it was morphine! Just like poppy plants have the enzymes that make opiates, cows also have enzymes in their liver that make morphine

and also make codeine. Tiny amounts of these narcotics end up in milk!

It is intermittent with

more in the spring than in the fall. Again, it is not a lot and probably not a big reason for the popularity of milk itself. But it is an important cause for the popularity of this milk product we know as cheese. More about this in a moment.

First, why are these morphine-like compounds also found in human milk?

It appears that the opiates from mother's milk produce a calming effect on the infant and, in fact, may be responsible for a good measure of the mother-infant bond. Like heroin or codeine, casomorphins slow intestinal movements and have a decided antidiarrheal effect. The opiate effect may be why adults often find that cheese can be constipating, just as opiate painkillers are.

Cow's milk is actually quite different from human milk. Cow's milk is loaded with casein, and very low in whey, the protein that remains in the watery portion after milk curdles. Human breast milk is the opposite: low in casein and high in whey.

As an aside, French researchers discovered that if a breast feeding woman included dairy products in her diet, cow proteins actually pass from her digestive tract into her blood stream and then into her own breast milk in large enough amounts to irritate her baby's stomach, causing colic.

Further, Swedish researchers found that opiates from breast milk sometimes pass from the breast into a woman's own blood stream and then into the brain. Some women with very high levels of these opiates in their blood have developed postpartum psychosis. Thus, it probably is not the stresses of childbirth, the arrival of maternal responsibilities, or the loss of youthful innocence that cause the emotional distress in the months after childbirth.

Let's look at the story of casomorphins a little more closely.

Why is Cheese Addicting?

Morphine in Milk
Concentration: 200-500 ng/l
Casomorphins
Opiates that form as casein
(primary milk protein) is digested
(broken down).

Casomorphins

The real lure of cheese is in its mother lode of opiates.

Each little gram of milk holds millions of individual casein molecules. If we examine one of these molecules of casein under a powerful microscope, it would look like a long chain of beads, the beads being the amino acids.

The problem here is that casein is frequently broken down in a manner different from any other protein molecule. As discussed in week three of this program, properly, protein is supposed to be broken down into individual amino acids prior to absorption from our digestive system to blood stream. Except that when we ingest casein, it sometimes doesn't break apart into individual amino acids. Rather it breaks into strings of three, four, five, six, or seven beads, that is, a chain of amino acids. Not good!

These chains have come to be called "casomorphins" (casein-derived, morphine-like compounds) because of their unusual properties and actions. These chains have drug-like effects with the most powerful of them having about 1/10 the opiate effect of morphine. We don't believe they are strong enough to make anyone drive funny. Nor are they likely to get us out on the street corner offering folks Velveta.

Now why cheese?

When we take milk and convert it to

Cheese

- Casein and whey are the two proteins in milk. Cow's milk is about 85% casein and 15% whey, while human milk is about the opposite.
- A cup of cow's milk contains about six grams of casein.
- Skim milk contains a bit more.
- Cheese contains casein, no whey; it is removed during the production of cheese and fat.
- It takes about ten pounds of milk to produce one pound of cheese.
- A one ounce slice of cheese holds about 5 grams of casein.

cheese, what we are doing is adding something to curdle the solids, so they lump together. Then we squeeze out all the water, all the lactose, all the whey protein, and we are left with pure casein and fat. So cheese is potentially the most addicting form of the substance.

There are a variety of these casomorphins and researchers have been teasing them apart for several years. The dairy industry has been aware of them for greater than twenty years. But we would hazard to guess that not one person in this room has heard about these opiate-like substances found in dairy products.

So where are we? We are beginning to understand why we choose certain foods and the tremendous power that food can have upon many areas of our lives. We have just thrown open the door to understanding, "why is it that I like an apple, but I am not hooked on it?" After a work out, or if it is a hot day, we love a juicy apple, some oranges, a bowl of cherries, a banana. These are delicious things, but they are

Casomorphins

From B-casein:

B-casomorphin-7 Tyr-Pro-Phe-Pro-Gly-Pro-Ile

B-casomorphin 5 (bovine) Tyr-Pro-Phe-Pro-Gly

B-casomorphin 5 (human) Tyr-Pro-Phe-Val-Glu

Morphiceptin Tyr-Pro-Phe-Pro-NH₂

From α₁-casein:

α-Casein exorphin Arg-Gly-Phe-Gln-Asn-Ala

not things that we tend to binge on. We do not go crazy for them. But on the other hand, sugar we do, chocolate we do, cheese we do.

The food companies have known about this information and have been working on

taking advantage of it for over 20 years.

They have been quite successful! The U.S. consumption of cheese **doubled**, from 15 to 30 pounds per person, per year, from 1975 to 1999.

Do we want to break the cheese addiction?

The average American is now gaining about 1.5 pounds per year. About 1.2 of those pounds is believed to be coming from cheese alone!

Let's look at some numbers in the diagrams below. First, we see calorie content. This is just two ounces (or one single sandwich). A fairly high amount of fat, and worse still, it is mostly bad fat. It is mostly the saturated fat: from foods like cheese that cause our cholesterol levels to rise. Then we have the cholesterol content itself. Notice that it is as high as a steak. So this is why breaking the cheese habit is as important as breaking the meat habit. And then notice the beans, grains, vegetables, and fruit at the bottom of the diagram to the right (zero cholesterol and very little fat).

For many folks, what really convinces them that breaking the cheese addiction is a good idea is that they have some arthritis. In fact, many often come into the office feeling like they have classic rheumatoid arthritis, but when they change their diet, something happened they did not expect. Their joints lightened up, and in some cases the difficulty went away completely. Then they drift away from their diet and their joints start grinding again. It turns out that in many cases, foods are the trigger; with dairy products probably the most common trigger. Interestingly, it is not the fat, but the protein that is causing the problem. So much for thinking that low-fat dairy products (actually touted by some so-called experts as health foods) are good for us!

Migraines are the same story. Certain foods will trigger them and cheese is one of the most common.

Digestive problems are very common. We

Cheese (2 oz.)

	<i>Calories</i>	<i>Fat (grams)</i>
Brie	190	16
Cheddar	228	19
Feta	150	12
Goat	206	17
Mozzarella	160	12
Swiss	214	16

Cholesterol (per 2 oz.)

Brie.....	56
Cheddar	60
Feta.....	50
Roast sirloin	50
Chicken breast, skinless	48
Salmon, Atlantic	40
Beans, grains	0
Vegetables, Fruit.....	0

Dairy Products

Arthritis

Migraines

Digestive Problems

Cancer

have seen so many people who thought they had irritable bowel syndrome and they were going to have it for the rest of their lives. But when they got away from dairy products they got much better.

Perhaps the most alarming topic to consider, however, is cancer. The latest research reveals that milk drinking men are at higher risk for prostate cancer (as well as other types of cancer). The milk protein, casein, seems to be a large player in this issue.

In the Physician's Health Study from Harvard, they studied 20,885 physicians and found those with an intake of >2.5 servings/day of dairy products had a 34% increased risk of prostate cancer. Their follow up study on 47,781 health professionals with an intake of >2 servings/day of milk revealed a 60% increased risk of prostate cancer.

Basic scientific studies on the initiation, promotion, and progression of cancer in laboratory animals have been especially remarkable and definitive on the role of animal proteins, especially casein (milk protein).

In the first diagram, to the right, we see the increased initiation of cancer associated with an increased intake of protein from 5% to 20% of total calories. The second diagram, we see the impressive increased promotion of cancer by increasing percentages of calories from protein.

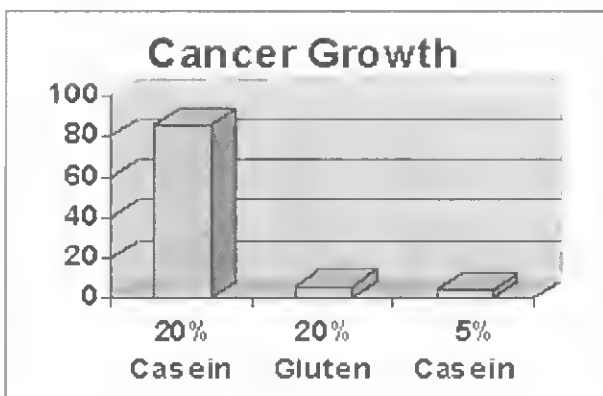
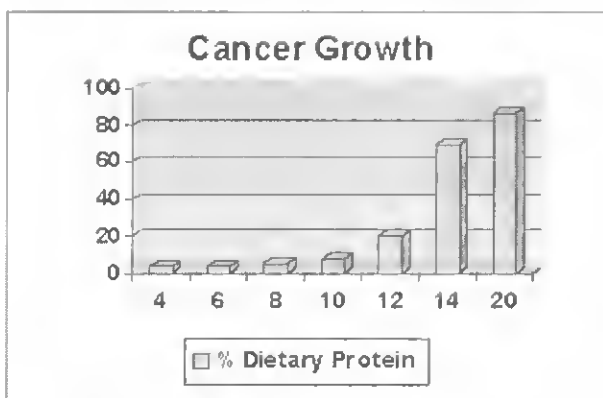
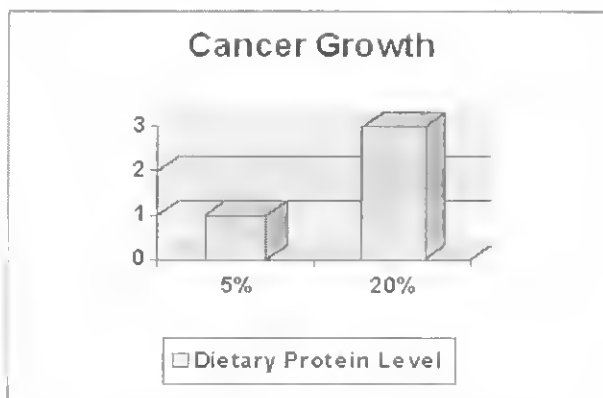
For each of the above experiments, casein was being used, which makes up about 85% of cow's milk protein (whey, is the other 15%). So the next logical question is whether plant protein, tested in the same way, has the same effect on cancer promotion as casein. The answer is "NO."

In the experiment, below, we see that plant protein did not promote cancer growth, even at the higher levels of intake. Gluten, the protein of wheat, did not produce the same result as casein, even when fed at the same 20% level. Soy protein was also studied and had the same

effect as gluten, the protein in wheat.

Like flipping a switch on and off, these animal studies revealed that cancer growth can be controlled merely by changing the levels of protein, regardless of initial carcinogen exposure (all the above animal experiments started with the animal being injected with a very high amount of a cancer causing substance).

When studying the effect of dietary protein on animals inoculated with cancer we find that



tumor growth can be turned on and turned off with a change in the percent protein in the diet. Another study to the right is seen with even more dramatic results. In this study, 5% protein fed animals were all alive at 100 weeks and the 20% protein fed animals were all dead at 100 weeks. There has been found no other chemical in our food, like casein, that has had this kind of cancer promoting activity!

The China Study, by T. Colin Campbell and colleagues, confirmed that animal proteins, especially dairy protein, have these same

<u>Dietary Protein</u>	<u>% Animals with tumors</u>
20% ^a	30/30 100% ^a
5% ^a	0/12 0% ^a

deleterious effects on humans, as the studies noted above, had on animals.

"Cheese **should never** be introduced into the stomach. . . . it is wholly unfit for food." Ministry of Healing, 1905. This makes more sense now, doesn't it?

Here comes the sizzle!

The last food addiction is meat. For many women it is chocolate or sweets, but for men it is often a different story. For men they say, "the last food I am ever going to give up is my steak."

Researchers back in April 2000 did an interesting study. They asked a group of men if they would give up meat for a week if they were paid a thousand dollars!

Now if we asked folks if they would be willing to give up raspberries for a week; peanuts for a week; or broccoli for a week for a thousand dollars, what would be the answer? Sure they could. They wouldn't need to be paid a thousand dollars to do it.

Opiate Blockade Cuts Meat Appetite

Ham down 10%
Salami down 25%
Tuna down 50%

"Would you give up meat for a week?"

1,244 adults, surveyed April 2000

Answered "No":

Asian Americans:	<10%
Hispanic Americans:	<10%
White Americans	24%
Black Americans	29%

But oddly enough when they asked people if they would be willing give up meat for a week for this large sum of money; about one in four white Americans said "no"; and about one in four black Americans said "no." For Asian and Hispanic Americans the numbers were much less, which shows that non-meat foods are much more a part of their culture.

Besides the addictive qualities of fat itself, which meat has in abundance, scientific tests suggest that meat may have subtle drug-like qualities, just as sugar and chocolate do. When researchers use the drug naloxone to block opiate receptors in

volunteers, meat loses some of its appeal.

Researchers in Edinburgh, Scotland, found that blocking meat's opiate effect cut the appetite for ham by 10%, knocked out the desire for salami by 25%, and cut tuna consumption by 50%. It appears that as meat touches our tongue, opiates are released in the brain. Additionally meat stimulates a strong release of insulin, which in turn is involved in the release of dopamine between brain cells.

How fascinating, if we use Narcan on a devoted meat lover, we get a similar result as we do with sugar, chocolate and cheese. These folks will eat meaty dishes if they are hungry, but their desire for them is diminished significantly.

Is it a good idea to break the meat addiction? No question. There is no food for which we have better evidence of serious health problems. Eating less

Breaking the Meat Addiction

- Reverse heart disease
- Lose ~ 10% of body weight
- Decrease cancer risk by ~ 40%
- Decrease blood pressure
- Improve or reverse diabetes
- Decrease risk of Alzheimer's disease

meat is associated with less risk of virtually every known disease and greater lifespan. Some of the benefits include reversing heart disease, losing about 10% of body weight, decreasing cancer risk by 40%, decreasing blood pressure, improving or reversing diabetes and decreasing our risk of Alzheimer's disease.

Not a bad way to go!

Conclusion

We are easily seduced by foods that leave us out of shape and often in poor health. Do we ever get hooked on spinach, cantaloupe, pears, or romaine lettuce? No, the seductions are sugar, chocolate, cheese, and meat mainly. We doctors presume that patients are reluctant to change their eating habits, and drug company profits depend in large part on this very fact. Happily, a growing number of people throughout all segments of society are anxious to know the truth on these issues and break free of the food addictions that cause such great suffering!

As we conclude, please gaze back and forth from The Addiction Carousel

diagram shown below. This diagram illustrates in a clockwise fashion the progression that occurs from our earliest days of infancy, through childhood, and into our adult years. From the addictive foods (chocolate, cheese, meat, sugar) to the addictive chemicals (caffeine, nicotine, alcohol) to the pain, anxiety, and depression and finally the destructive high risk behaviors we may clearly understand the pathway to suffering.

Through these foods, chemicals and activities our brain releases a bit of dopamine, the brain's main pleasure-producing chemical. Dopamine is central to virtually anything that feels good. A food

treat, a romantic flirtation, or anything our brain takes to be a good thing, causes dopamine to lock onto brain cells and build a permanent memory trace of where pleasure comes from. It keeps flavors, scents, and even sexual experiences alive in our mind, and makes us want to experience them again and again.

What if someone invented a chemical that could trigger the brain's pleasure circuitry, a chemical that did not make us stronger, or assist us in any other way, but still gave our brain a feeling so warm and pleasant that we would want to repeat it over and over? Well, someone did! Heroin, cocaine, alcohol, nicotine, and, in fact, all recreational drugs work on the brain's pleasure center, triggering a greatly exaggerated dopamine response. Someone also invented chocolate bars, wedges of cheese, cookies, and doughnuts. All these foods are capable of stimulating ***precisely the same part of the brain*** that responds to heroin!

Chocolate hits the brain and causes a habituation that is as real and physical as addiction to narcotics. When volunteers take the opiate blocker naloxone, their desire for chocolate falls away almost instantly. Ditto for ice cream and other snack foods. Opiate blockers can stop chocolate addiction dead in its tracks. These drugs have also been used to help people control other excesses of the brain's reward system.

Researchers at the University of Minnesota gave an opiate blocker to a group of compulsive gamblers. Seventy-five percent of them were much improved, compared to only 24 percent taking a placebo. Compulsive gamblers have lower

than normal levels of the brain's dopamine receptors, meaning that they get less pleasure from everyday activities than other people do and therefore seek out extra stimulation just so they can feel normal. Over weight people also have fewer brain receptors for dopamine compared to slender people. Through repeated overeating and wrongful eating they have caused the brain to reduce the number of these dopamine attachment sites (God's warning for us all is found in Luke 23:34).

Stimulating the brain's opiate receptors can bring a bit of a high. But, as an addiction, to food or anything else, becomes established, the brain adjusts so as to expect the stimulation to continue. Between doses, feelings of emptiness, anxiety, or depression begin to take hold, and the brain comes to rely on addictive substances and activities to make these feelings vanish.

What's the answer? How can we back ourselves out of this cycle of destruction that we unknowingly entered into from our earliest days? No long dissertation is necessary to answer this question. The answer is simple and very near and while it may require some patience on our part, success is ultimately guaranteed. The principles of STARTNEW, described on page 135 and 136, all work to elevate, stabilize and balance our dopamine levels. Preserving freedom, unlike the foods and chemicals above, they provide us with the joy, peace, and abundant life we are all driven to desire.

The Addiction Carousel

Matthew 24:4

Revelation 18:23

2 Thessalonians 2:10

"Intemperance, in the true sense of the word, is at the foundation of the **larger** share of the ills of life, and it annually destroys its tens of thousands."

"If we could realize that **our eternal destiny** depends upon strictly temperate habits."

Chocolate

Cheese } opiates
Meat ↓

"Gluttony is the prevailing sin of this age."

Sugar _ opiates _ dopamine* _ feel good "brain" chemical

Decrease

dopamine ← High risk behaviors (Sin) ← natural dopamine ← caffeine _ nicotine

activity

gambling
pornography

↓ ↓ ↓

endorphins depleted

(production decreased by dopamine stimulation)

chronic pain _ pain killers (opiates) _ dopamine

"The diet has **much to do** with the disposition to enter into temptation and commit sin."

dopamine

↗ ↘

antidepressants
anxiolytics

↗ ↘

"The controlling power of appetite will prove the ruin of thousands, when, if they had conquered on this point, they would have had moral power to gain the **victory over every** other temptation of Satan."

Sugar, Chocolate, Cheese, Meat

dopamine

*all dopamine symbols cycle back here
*all dopamine symbols cycle back here

"There are **few** as yet who are aroused sufficiently to understand how much their habits of diet have to do with their health, their characters, their usefulness in this world, and their eternal destiny."

".... The reason why **many of us** will fall in the time of trouble is because of laxity in temperance and indulgence of appetite."

"The **greatest cause** of human suffering is ignorance on the subject of how to treat our bodies."

"... We need to learn that indulged appetite is the **greatest** hindrance to mental improvement and soul sanctification. ..."

Afterword References

Genesis says “fruits, grains, vegetables, and nuts; they shall be your food.”
Inspiration and science deliver the same message of a simply prepared, unrefined diet.

“Grains, fruits, nuts, and vegetables constitute the diet chosen for us by our Creator. These foods prepared in as simple and natural a manner as possible, are the most healthful and nourishing. They impart a strength, a power of endurance, and a vigor of intellect, that are not afforded by a more complex and stimulating diet.”

Ministry of Healing, 1905

“.... The reason why many of us will fall in the time of trouble is because of laxity in temperance and indulgence of appetite.”

Review and Herald, 10-21-84

“The controlling power of appetite will prove the ruin of thousands, when, if they had conquered on this point, they would have had moral power to **gain the victory over every other temptation of Satan.**”

Counsels on Diet and Foods, page 163

“The diet has much to do with the disposition to enter into temptation and commit sin.”

Counsels on Diet and Foods, page 52

“If we could realize that **our eternal destiny depends** upon strictly temperate habits.”

The Health Reformer, 8-1-75

“There are few as yet who are aroused sufficiently to understand how much their habits of diet have to do with their health, their characters, their usefulness in this world, and their eternal destiny.”

Second Advent Review and Sabbath Herald, 9-23-84

“... We need to learn that indulged appetite **is the greatest hindrance to mental improvement and soul sanctification.** ...”

Testimonies, volume 9, page 156

“The indulgence of appetite affects them in all the relations of life. ...You cannot make them [unbelievers] understand the truths for these last days.”

Testimonies, 2, page 368

Scripture-based Thinking Model

In considering any issue or situation, we face three fundamental questions:

What is right?
What is desirable?
What is doable?

The great news is that we only have to contend with the first question: “what is the right thing to do?” **Every** other question or consideration only serves to bring confusion and, ultimately, deception upon us.

“Do I **want** to do?” “Do I **feel** like doing?” “Do I **desire** to do?” These questions are as out of place in the spiritual mind as, “**Can I** do?” For the Scriptures tell us, “it is **God which worketh** in you both to will to desire and to do to have the power of his good pleasure” Philippians 2:13.

In other words, the Lord tells us, “You decide what is right to do, commit to this course of action, and then I will give you, through grace, not only the power to do it but also joy in the performance.

Consider the following: “Not by [your] might, nor by [your] power, but by my spirit, saith the LORD of hosts” Zechariah 4:6. “If ye know these things, happy are ye if ye do them” John 13:17. Yes, He provides both the **strength to do** and the **happiness that comes after right doing!**

Moreover, even the question, “what is right” is not really a problem. For if right was not knowable, and clearly so, how could God be a righteous judge? Indeed, confusion on what is right and what is wrong is **never** our primary problem (Romans 1:20).

Knowing these facts, Satan strives to redirect us to the latter two questions; those being, **what do I want** or **feel like doing** and/or **what can I do?** Then he can subtly help us rationalize our thoughts on right and wrong and thus justify a wrong course of action.

“Thou hast answered right: this do, and thou shalt live” (Luke 10:28; see also 2 Thessalonians 2:10).

Praise God! He does it all!

Victory over Cancer

What thoughts come into our minds when we think about Cancer? Certainly the two most likely would be fear and death, and of course, these two thoughts are intimately related. Well, God does not want us to live in fear or the fear of death (Psalm 23:4) and maybe nowhere in this material is that idea more dramatically demonstrated than in this discussion about Cancer.

Cancer, even in our age of scientific

accomplishment, like leprosy of Bible times, is considered by scientist and lay person alike to be complex and devilishly mysterious. These very thoughts may make it difficult to believe the truth soon to be revealed about this disease since the truth is both very simple and very easy to implement. The dichotomy between the truth and the misinformation is absolutely amazing.

Let's begin this exciting journey!

During the later half of the 20th century, the Adventist Health Study revealed that dying from heart disease was over seven times less likely in those who followed the Lord's dietary plan. Amazingly, those who participated in His original plan of fruits, vegetables, grains and legumes were found to have only 14% the rate of heart disease deaths as the general population who consumed the typical American fare.

Now that is great news, yet as the diagram to the right reflects, the results for cancer were even better! Those who ate according to God's original plan were over 30 times less likely to die from cancer as the general population.

Indeed, what we have come to believe over the past fifty years is that cancer, arguably the most feared disease of all, probably responds better to obedience to His plan than any other disease. Indeed, we

Adventist Health Study I

<u>Group*</u>	<u>Coronary (heart) death rates</u>	<u>Cancer death rates</u>
General Population	-----	-----
'clean' meat eaters**	56% ₀	40% ₀
lacto-ovo vegetarians	39% ₀	25% ₀
total vegetarians	11% ₀	3% ₀

***Males age 35 and over as percent of expected in comparison with general population**

**** for a discussion on 'clean' meats please refer to the question and answer on page 192-4**

can expect mighty blessings as we submit to God's will for our lives.

Over the past several weeks, as we have begun infusing some of the principles of the START NEW program, we have undoubtedly begun to experience some of its many benefits. Wonderful things such as feeling and looking better with more energy, losing weight, less pain of arthritis, fibromyalgia, etc., lower blood pressure and

blood sugar and less need for medications. In contrast to these benefits, which are usually obvious to us and those around us, there are other benefits that are not so obvious. These we refer to as the 'hidden benefits' of START NEW. Among others,

these include the items listed below. As we gaze at these less obvious benefits of God's program, we eventually arrive at the bottom and the issue for the moment, that is, a lowered risk for all types of cancer. An exciting prospect without doubt!

The Hidden Benefits of START NEW

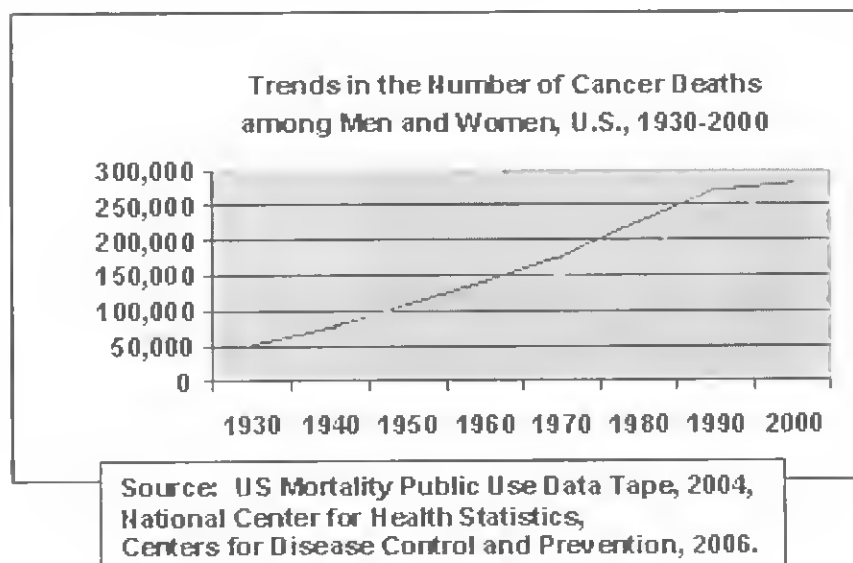
- Preserve our eyesight in our later years
- Avoid surgery in many instances
- Prevent and even reverse heart disease
- Live longer
- Keep our bones strong
- Avoid impotence
- Avoid stroke
- Prevent kidney stones
- Keep our children from getting Type 1 diabetes
- Avoid Alzheimer's disease
- Lower our risk of ALL cancers

Background

Before we proceed, let's gain some historical background on the magnitude of the problem. The year is 1900 ... and cancer is the tenth leading cause of death in the United States, responsible for only 3 percent of all deaths. However, by the end of the 20th century, cancer will be the cause of over 20 percent of all deaths in the United States, with about 600,000 Americans dying prematurely from Cancer each and every year.

Interestingly, the Lord's program of START NEW is especially focused on prevention. While it also cures disease in ways available nowhere else, God's

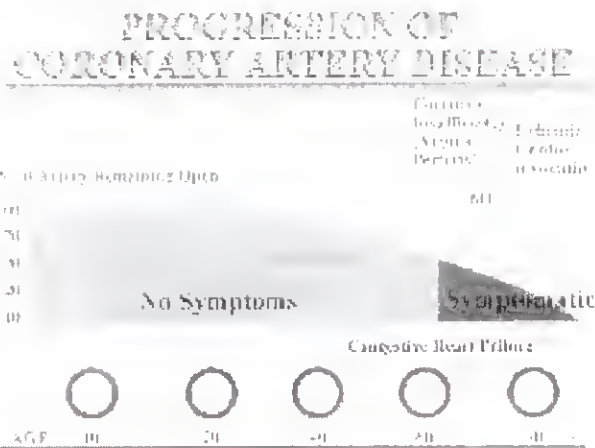
primary desire is that we would be well and not need to suffer. Would not any earthly father desire to prevent needless suffering in the children they love? How much more our Father in heaven!



Is it safe to wait?

To illustrate the benefits of prevention over waiting until disease has developed let's look at the relationship of cancer symptoms and screening tests to the course of Cancer. The question to be asked is the following:

- Is it safe to wait ...
- A. until we develop symptoms or
 - B. until a screening test becomes positive
- Before we treat Cancer?



Let's again use heart (coronary artery) disease as an illustration. Remember from week number four the diagram to the right, which illustrates that symptoms of disease only begin decades after the disease process has begun. That is heart disease might start developing while we are in our teens or twenties, yet, we will have no idea of this fact until symptoms of angina are experienced when we are in our fifties or sixties. Indeed, some people have a heart attack as their first symptom!

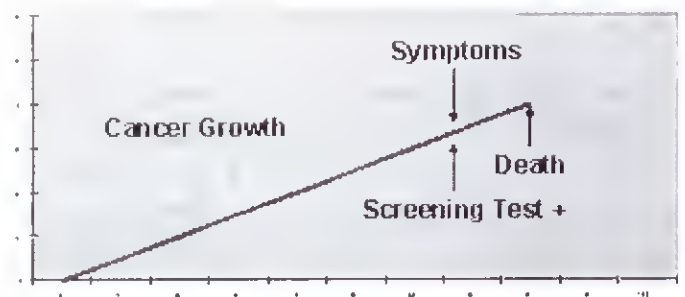
Well, Cancer is much the same way. The diagram below, while not a scientific study, is a representation of this same phenomenon. Again, this illustration

represents the reality that cancer is developing in us long before we experience symptoms testifying to this fact.



Now let's turn to the concept of screening tests. Here the purpose is to diagnose cancer as early as possible and certainly before symptoms present themselves. Now the top twelve cancers that lead to death include lung, colo-rectal, breast, pancreatic, prostate, leukemia, lymphoma, liver, ovarian, esophageal, bladder, and kidney. While only five of these twelve actually have screening tests developed that are somewhat reliable. Only two of these cancers, that is, breast and prostate, are commonly diagnosed by a screening test. That is to say that ten of these twelve cancers are detected only after a person begins to complain of symptoms of their disease. And as we already have stated symptoms typically occur only after the disease is in its advanced stage.

Do we want to wait to treat cancer until symptoms present or the screening test turns positive? NO!



When symptoms are present or the screening test is positive the disease is usually in its advanced stage.

The Causes of Cancer

Let's consider a series of questions as we continue. Sadly, the answers to these questions are poorly understood, even among our medical profession.

Can doctors explain why one person develops cancer and another does not?

Do certain risk factors increase the chance that a person will develop cancer?

Can we avoid the risk factors that seem to cause cancer?

Is much of what causes cancer due to family history, which can not be changed?

Can we protect ourselves from known risk factors?

Does everything cause cancer?

Is cancer contagious?

Does an injury, such as a bump or a bruise cause cancer?

Recently, we spent several hours on the internet researching the causes of cancer. Below is a list of the many causes given by a large variety of "experts."

- Radiation (incl. mammography)
- Carcinogens (chemicals)
- Aflatoxins
- Emotional "toxicity"
- Nutritional deficiencies
- Toxic chemicals & pesticides (including dental toxins i.e. fillings)
- Oversupply of omega 6 fatty acids
- Undersupply of omega 3 acids
- Hydrogenated fats
- Cellular oxygen deprivation
- Fluoridation
- Freezing plastic water bottles
- Divorce
- Delayed first full term pregnancy
- Radon
- Underwire bras
- Tobacco
- Smokeless Tobacco
- Smoking cloves
- Genetics
- Obesity
- Asbestos
- Benzene
- Formaldehyde
- Human Papillomavirus
- Stress
- Scoliosis
- Silicone Breast Implants
- Antiperspirants
- Deodorants
- Vasectomy
- Abortions
- Soy products
- Marijuana
- Lipstick
- Body Piercing
- Tampons
- Fungi producing mycotoxins
- Chlorine
- Parasites
- Geopathic Stress
- Power Lines (Magnetic Fields)
- Cell Phones
- Fluorescent Lighting
- Mental factors
- Spiritual factors (incl. "karma")
- Acrylamide
- Artificial Sweeteners
- Splenda
- Nutrasweet (Aspartame)
- Saccharin
- Heterocyclic amines (cooked meat)
- Post-Menopausal Hormones
- DES (Diethylstilbestrol)
- Sun exposure
- Bottle feeding
- Lymphatic restriction (tight clothing)

As we scan this list one might begin to wonder; does everything cause cancer? Indeed, we are led to consider this very thought when news story after news story regales us with the newest link to cancer. Here is part of the fear factor. Let's stop right here and now and make an important point. The primary cause of any disease, cancer included, can never be:

- A) Difficult to understand
- B) Complex
- C) Beyond our control

All of these possibilities run contrary to the character of God. The Lord makes things easy to understand and uncomplicated, so all can appreciate the truth, including the simple or uneducated. Further, He makes the primary cause of disease something within our control, so that only our choices (not someone else's) determine our future and our standing with Him in the judgment.

Is there any hope?

Because we have gone so very far from a close intimate relationship with our tender, loving Saviour we have a great tendency to have these common thoughts about the cause of Cancer:

- A. It's Fate
- B. Cancer runs in my family
- C. Bad genes cause cancer!
- D. Dangerous chemicals are the problem!

Almost everyone I meet, whether scientist or layman, Christian or not believes that one or all of the above are the primary cause of Cancer. How very sad! For among other things, these answers greatly decrease our hope for something better and they cause us to believe that change is impossible. This is exactly what the Adversary of souls desires!

The Search for a Cure

In 1971 President Richard Nixon and the U.S. Congress declare war on cancer with the National Cancer Act. President Nixon boasted hopefully, "This legislation—perhaps more than any legislation I have signed as President of the United States—can mean new hope and comfort in the years ahead for millions of people in this country and around the world." The exciting news today is that the dream that our President had over 35 years ago has come true!

Today, the exciting News of Victory! The START NEW plan has been scientifically proven to prevent 32 out of 33 cases of fatal Cancer (a 97% success rate).

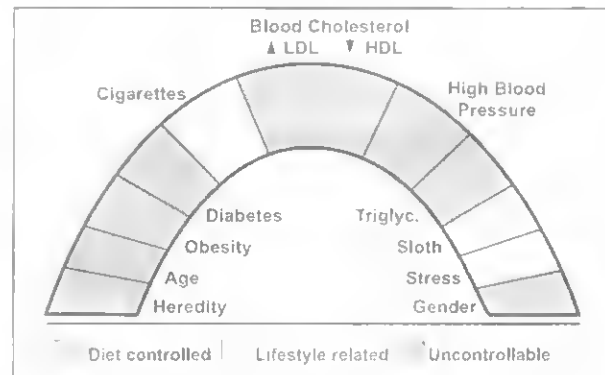
News Flash
Headline
The War on Cancer
has been won!

The Primary Cause of Cancer

As we consider the primary cause of this greatly feared disease, let's narrow the possible answers down to three possibilities (bad genes, bad chemicals, and one other).

Now we have already considered briefly above the spiritual ramifications of the possibility that bad genes (heredity, family history) are the primary cause of cancer. Notice also the diagram to the right that we considered back on the first week. Here we have the causes of heart disease on the arch with the factors that have been proven scientifically to be the most important listed highest on the arch. While heredity does play a role in the development of heart disease its contribution is the lowest of all the listed factors.

Notice also that those items which are beyond our control are the least important. As mentioned above this is a reminder that our Lord is very good to us.



The higher on the arch, the higher the contribution of the risk factor to heart disease. Five of the eight controllable risk factors are largely under the control of diet.

Do bad genes or bad chemicals cause cancer?

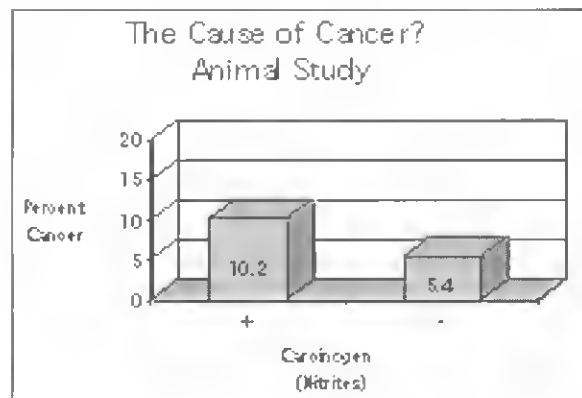
The authors of a major review on diet and cancer, prepared for the U.S. Congress in 1981, estimated that genetics (our heredity) only determines about 2-3% of the total cancer risk.

So much for genetics, but how about all the bad chemicals (carcinogens) that we are exposed to in modern day society? Aren't there hundreds and thousands of chemicals in second hand smoke, our food supply, our water, as well as the air that have been proven to cause cancer? The answer is yes! It seems so much like chance. A roll of the dice. Is there any hope? YES!

Okay, environmental chemicals are a problem. Indeed, from 1920 forward to 2000, U.S. production of synthetic chemicals increased from less than one million pounds

a year to more than 140 billion pounds a year. Many therefore have raised the question: how much do these chemicals, that we are all exposed to every day, add to our cancer risk? Are they the primary cause of all this cancer?!?

Below, we have an interesting study



done on a group of lab animals. In this study, researchers separated animals into two groups, with the only difference being that one group was exposed to a carcinogen (a chemical that causes cancer) and the other group was not. The group exposed to the carcinogen developed cancer at twice the rate of the other. This might tend to confirm our suspicions that it is those bad chemicals of our modern society that play a major role in cancer. But wait! These results only occurred in lab animals when they were fed exceptionally high levels of nitrites for almost half their lifespan (equal to the nitrites in over

100,000 hot dogs eaten each and every day).

So is this realistic? Have any of us, could any of us, eat 100,000 hot dogs per day, let alone an entire lifetime? Of course not! The point to be made from this research is that in order for chemicals to cause cancer to develop at significantly higher rates, the exposure has to be at a level that is ridiculously unrealistic. Let us again make the point that environmental chemicals cause us significant problems in our modern society and we should work as a nation to decrease our exposure. However, they are not the primary cause of Cancer!

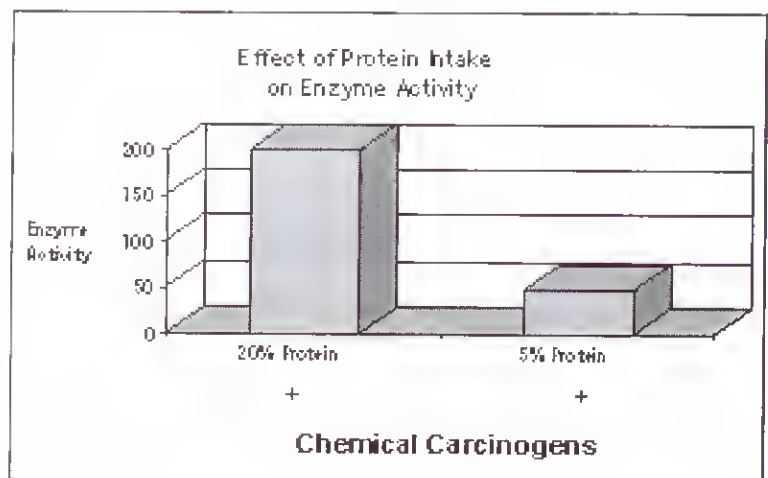
The MAJOR Cause of Cancer

Let's finally begin our discussion of the major cause (notice this is singular, not plural) of cancer. Let's point out as background two thoughts. First cancer has three stages, that is, it starts, it grows and it spreads (metastasizes). Pretty simple, huh? The second thing to remember is that today the average American consumes 75 to 150 grams total of protein per day, or about 10-20% of their calories from protein."

In the first stage of cancer development normal cells genetically change (mutate) into cancerous cells. This process involves dozens of steps and many of them require certain enzymes to be successfully accomplished. Interestingly, as the study to the right reveals, the enzyme activity required to allow bad chemicals to hurt our cells is greatly increased by a 20% protein diet as compared to a 5% protein diet.

What does this mean? A low protein diet stops carcinogens from damaging our cells and starting cancer! Further, it has been shown that among those dozens of necessary steps to cancer formation a low protein intake slows down each and every one of them!

Okay, so a low protein diet can dramatically decrease the start of cancer. But, what happens during stage two



(cancer growth), when the cancer cells are multiplying into cancerous tumors?

We have three very interesting studies shown to the right, which help us to answer this question very well. In the first study we see that the tumor response is dramatically greater when the individual is consuming a 20% protein diet.

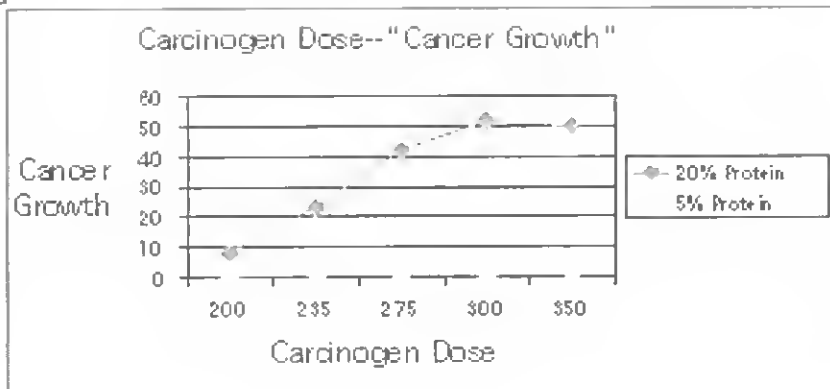
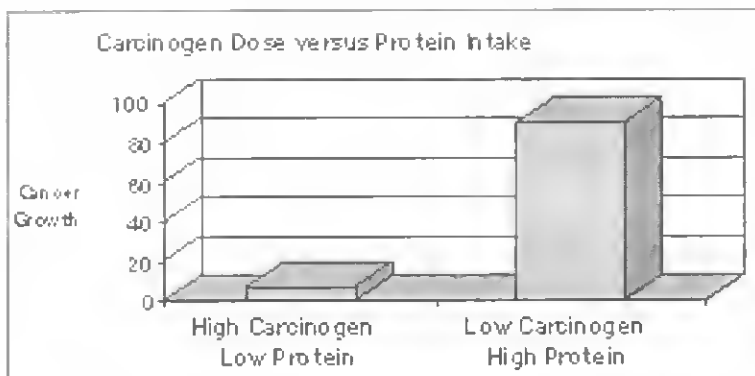
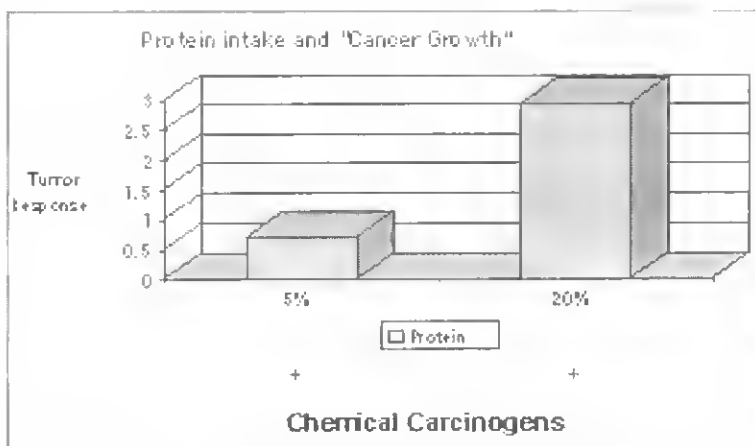
In the second study, we see a most amazing result. Notice that the first group are exposed to a high amount of cancer causing chemicals (carcinogens), while the second group is exposed to very little. (We might say that the first group was forced to eat a 100,000 hot dogs or smoke a thousand packs of cigarettes DAILY, while the second group had a mere three or four hot dogs and only one pack of cigarettes per day.)

Wouldn't we expect the first group to have most of the cancer growth? It would seem so. However, the opposite occurred! The group with the high carcinogen exposure had very little cancer growth if it was fed a low protein diet, while the group with the low carcinogen exposure still developed a great deal of cancer growth if it was fed a high protein diet. A low protein intake trumped the chemical carcinogen, regardless of the amount of carcinogen exposure!

In the third study, we see that no matter how high the carcinogen exposure was increased a low protein diet completely protected the subject from cancer growth.

Yet another demonstration that a low protein diet can override the cancer causing effects of even a very powerful carcinogen.

The conclusion of these studies is that "cancer growth" was almost entirely dependent on how much protein was consumed, regardless of the quantity of chemical carcinogen exposure!



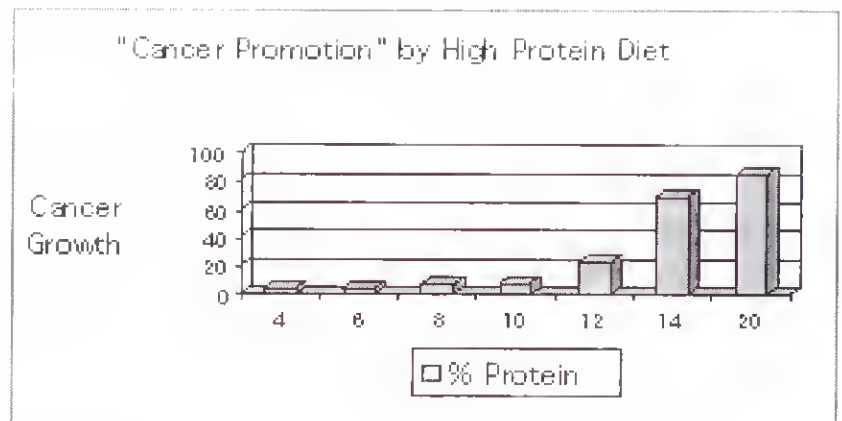
The Physical points us to the Spiritual

All through these eight studies we have been amazed at how God uses the scientific laws of nature revealed through health to teach us something of His loving character. Let's consider, therefore, the last few studies from this perspective and gain this most important lesson.

Yes, carcinogens are a problem; however, cancer is primarily the result of consuming a high protein diet. In the same way, yes, we are all born with a fallen, evil, sinful nature or tendency; however, it is our choice or how we chose to act when confronted by that nature that determines whether we are safe or in trouble. Amazingly, we are never overwhelmed by those things that are out of our control (1 Corinthians 11:30). Or said another way, "where sin abounded, grace did much more abound." Romans 5:20. Praise the Lord for that!

Returning to the major

cause of cancer, we find the study to the right, again ably reveals that it is the amount of protein in the diet that is the decisive factor. In this study, we have seven different groups dissimilar only in this issue. As the amount of protein increases so to does the amount of cancer growth increase. Now let's remember that the average American consumes between 10-20% protein, while the World Health Organization recommends only 5-6% by calories. Not hard to understand why Americans suffer under such an epidemic of cancer, is it?



Thoughts to Consider

- Is it possible that chemical carcinogens and bad genetics do not cause cancer unless the nutritional conditions are "right"?
- Is it possible that, for much of our lives, we are being exposed to various amounts of cancer causing chemicals, but cancer does not occur unless we consume a high protein diet?

But wait, an obvious question that we need to answer is whether all types of protein have the same impact on the Cancer issue. First let's mention that all the previous studies considered used the protein casein, which is the primary cow's milk form of protein. How about the other types of protein? Would they have the same or a different effect?

To answer this question, researchers ran the study to the right. In addition to having a group eating a high and low quantity of casein, they also had one group eating a 20% soy protein diet and another eating a 20% gluten or wheat protein diet. The result? Only the high casein diet stimulated cancer growth.

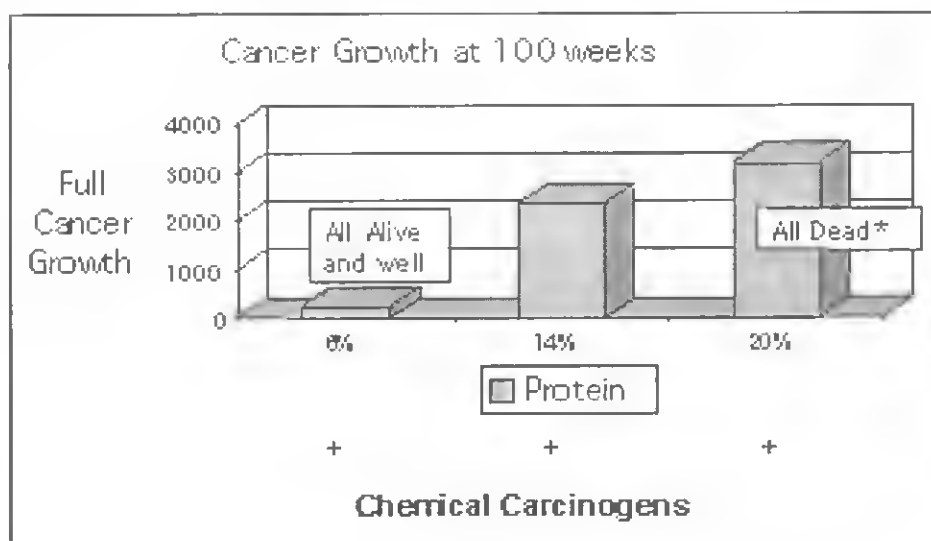
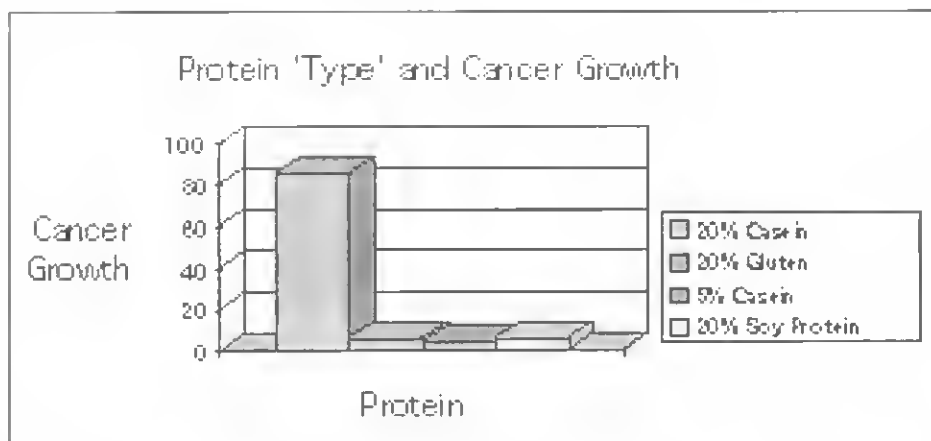
Like flipping a light switch on and off, we can control cancer growth merely by changing levels of protein in the diet, regardless of initial carcinogen exposure. But the cancer-promoting factor is only found in animal foods!

Thus far we have been looking at only the relatively early stages of cancer growth. Now let's look at the later stages (or stage three) of cancer growth and spread, which leads to the end of life. Again, we see the dramatic difference entirely the result of the protein content of the diet. Notice the diagram to the right and the all or nothing result between the group getting 6% casein and the group receiving 20% casein. While the former group is all alive and well, the later group is virtually all dead!

Wow, what an amazing story! Yes, genetics plays a part. Yes, exposure

to carcinogens plays a part. However, the amount of animal protein has the leading role in this play! Great news in its simplicity yes, but also because it is only our diet that we can, with the Lord's help, change. God is Good.

As we finish this story let's ask what happened to the animals that had their diet switched at towards the end of their lives? This would investigate the reversibility of cancer promotion. Even at this late date, animals switched from a high protein diet to a low protein diet had significantly less tumor growth (35-40% less!) than animals not switched.



Are these animal studies relevant to us?

Yes! Over the last 40 years the "China Study" and the "Adventist Health Study" (among others) have discovered these exact same facts. That is, the quantity of animal protein is the major factor in the majority of cancer cases!

This is consistent with God's original dietary prescription found in Genesis 1:29:

"And God said, Behold, I have given you every herb bearing seed, which is upon

the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed, to you it shall be for meat."

In other words, God's original plan was for a vegan, unrefined diet where is found no animal proteins at all!

Cancer Risk

Genetics	~2-3%
Chemicals	~2-3%
Animal Protein	> 90%

Cancer ... Is there any hope?

Conclusions

1. Everyone, by virtue of their genetics and carcinogen exposure, has an amount of animal protein that will lead to cancer.
2. Regardless of genetics and carcinogen exposure, a diet that is low in animal protein intake will prevent the occurrence of cancer in the large majority of humans.
3. It is likely that if started early enough cancer could be stopped in its tracks if the intake of animal proteins is reduced to zero and the intake of whole plant foods, with their rich supply of anti-cancer phytochemicals becomes the basis of our new dietary program.

The Lord's Health Plan The Hidden Benefit

**The War on Cancer
has been won!**

***A low animal protein diet prevents cancer
in almost EVERY case!***

The Final Thoughts: The Best Life

The benefits of a healthy lifestyle are enormous. The experience of thousands of participants has revealed that we can:

- Live longer
- Look and feel younger
- Have more energy
- Lose weight
- Lower our blood cholesterol
- Prevent and even reverse heart disease
- Lower our risk of prostate, breast and other cancers
- Preserve our eyesight in our later years
- Prevent and treat diabetes
- Avoid surgery in many instances
- Vastly decrease the need for pharmaceutical drugs
- Keep our bones strong
- Avoid impotence
- Avoid stroke
- Prevent kidney stones
- Keep our children from getting Type 1 diabetes
- Alleviate constipation
- Lower our blood pressure
- Avoid Alzheimer's disease
- Beat arthritis
- And more . . .

These are only some of the benefits, and all of them can be ours. The price? Simply changing our lifestyle. It has never been so easy or so relatively effortless to achieve such profound benefits.

Let's summarize the lessons we have studied about food, health and disease and notice how each of these principles have been guided and agree profoundly with the Scriptures we have reviewed.

START NEW Dietary Principles

1. Nutrition represents the combined activities of countless food substances. The whole is greater than the sum of its parts.
2. “Nutritional supplements” like all alterations of God’s design do not enhance our well-being but rather increase our risk for illness.
3. There are no nutrients in animal-based foods that are not better provided by plants.
4. Genes do not determine disease on their own. Genes function only by being activated, or expressed, and nutrition plays a critical role in determining which genes, good and bad, are expressed.
5. Nutrition can substantially control the adverse effects of noxious chemicals.
6. The same STARTNEW principles that prevent disease in its early stages (before diagnosis) can also halt or reverse disease in its later stages (after diagnosis).
7. Nutrition that is truly beneficial for one chronic disease will support health across the board.
8. Good nutrition creates health in all areas of our existence. All parts are interconnected.
9. The “when” of our dietary habits is as important as the “what” because order and regularity are built into God’s creation.
10. Like the universe around us, our body and minds were created to favorably respond to order, structure and regularity in all life’s activities.



Last Messages

Well, we have finally arrived to the last meeting of our eight week program. Yet, before we begin to discuss pharmaceuticals, let's take this last opportunity to review the larger issues of the purpose for the START NEW program.

These are some of the core take home messages of the Lord's program:

1. God plans for health

"Beloved, I pray that you may prosper in all things and be in health, just as your soul prospers."

3 John 2

In this text, we see that it is:

A. God's desire that His children would prosper in health both in the future life as well as here and now!

B. God has created us with the predisposition for wellness. His plan includes health as a birthright, lost through violation of His law, and in mercy re-obtained by submission to his will.

- 81% take at least one medication during any given week
- 50% take at least one prescription drug any given week
- 25 million have heart disease and 1 million die per year
- 35 million suffer from chronic/severe headaches
- 65 million suffer from chronic back pain
- 50 million have high blood pressure
- 66% of adults are overweight
- 33% of adults are obese
- 25 million have diabetes
- 600,000 die from cancer per year



2. Sickness is epidemic

As the statistics, listed below, in America's health report card reveal, sickness is indeed a common experience in our nation.

3. Restoring health is easy

Week by week, we have been studying the causes and reversibility of our most common ailments. Obesity, high blood pressure, heart disease, diabetes, and pain all usually have simple causes and easy remedies. We have come to expect God's goodness to be revealed through the simplicity of understanding and solving the many ailments that cause us such distress. We like how this is revealed in the text below:

"And ye shall serve the Lord your God, and he shall bless thy bread, and thy water; and I will take sickness away from the midst of thee." Exodus 23:25

Yes, it is that easy. Remember, two points. First, from John Bunyan (The Pilgrim's Progress). "What man can not believe, God cannot achieve." Second, the mighty twin virtues of patience and faith. The answer is simple, but providence may decide it best for a waiting time, before the promise is fulfilled.

4. His church has the remedy

God has designed a place of safety, where His children might find refuge from the diseases and deceptions common to mankind. As we participate with Him, submitting our lives (Romans 12:1) to His will, He has made an awesome promise (Exodus 15:26) to us. What an unbelievable contract!

Moreover, it involves more than just us. As He has bestowed this information to man, only through His church, it is therefore the means by which the Great Commission (Matthew 28:18-20), that is service to others, may be carried out.

5. Health aids spiritual strength

The thoughts above leads us to consider the practical means by which God's eight laws of health provide for not only our physical but also our eternal health. Notice this almost unbelievable quote, which we considered as we studied The Addiction Carousel.

"The controlling power of appetite will prove the ruin of thousands, when, if

Curing Chronic Diseases

<u>Disease</u>	<u>Cure</u>
Heart Disease	Low fat intake
Diabetes	Low fat intake
Hypertension	Low salt intake
Cancer	Avoid animal protein
Osteoporosis	Avoid animal protein
Autoimmune Dz	Avoid animal protein
Digestive Dz	No dairy products
Pain	No dairy/sugar
Back Pain	Avoid caffeine/nicotine
Overweight	Temperance/exercise
Arthritis	Avoid dairy/sugar

they had conquered on this point, they would have had moral power to gain the victory over every other temptation of Satan."

Counsels on Diet and Foods, page 163

Our first parents fell, in part, on the question of appetite and Christ, in the wilderness, on our behalf, conquered over this same issue. The intimate relationship is therefore worthy of our study.



6. Godly healing restores trust

How did our beloved Saviour work to save man? It is noteworthy that He spent more time in healing than in preaching. Notice the issue below:

The Saviour made each work of healing an occasion for implanting divine principles in the mind and soul. This was the purpose of His work. He imparted earthly blessing, that He might incline the hearts of men to receive the gospel of His grace.

The Ministry of Healing, page 20

Through START NEW God seeks to do the same today!

7. Trust allows eternal reward

As with everything else in God's perfectly designed program. His plan is to restore trust, which provides God with the legal means by which He can save each one of us.

"And the LORD shall help them, and deliver them: he shall deliver them from the wicked, and save them, because they trust in him." Psalm 37:40

START NEW

Take Home Messages

1. God plans for health
2. Sickness is epidemic
3. Restoring health is easy
4. His church has the remedy
5. Health aids spiritual strength
6. Godly healing restores trust
7. Trust allows eternal reward



Pharmaceuticals

Sometimes these powerful agents are called drugs and sometimes medications. By any name they are concentrated forms of biologically active chemicals, that is, they change the chemical reactions and therefore the activity within our body. Let's spend our time today discussing these 'remedies,' which are such a significant part of our modern health care system.

During our previous discussions, we have utilized a principle which also is very applicable to the issue of drug medications. The principle is found in Matthew 19:6:

"What therefore God hath joined together, let not man put asunder."

Though commonly employed, and rightly so, during the formal, public, marriage ceremony, this verse rightly describes the core problem with refined food products and nutritional supplements. Not trusting God, they are examples of mankind's attempt to improve on God's design. Inherent in pharmaceuticals is the same problem.

Nature, through the eight laws of health, is perfectly adapted to provide for all the needs of the human body. The complexity of both, while fascinating, renders human manipulation, at best foolhardy, and at worst dangerous. Yet the sufferer is not adrift without hope. God through nature is always faithful, and thus nature provides as man needs and that with gentleness and balance attesting to the character of the Creator.

Sadly, as mankind is led away from God, the human mind turns to delusions of its own magnificent grandeur. Thus are born refined food products, nutritional

supplements and drug medication. All of these decrease health and longevity!

"Go up into Gilead, and take balm, O virgin, the daughter of Egypt: in vain shalt thou use many medicines; for thou shalt not be cured." Jeremiah 46:11

Providing the proper context and balance to this discussion is very important and thus we would like to again draw the reader's attention to the caution on the first page of this syllabus.

Nothing written in this book should be viewed as a substitute for competent medical care. Also, you should not undertake any changes in diet or exercise patterns without first consulting your physician, especially if you are currently being treated for any risk factor related to heart disease, high blood pressure or diabetes.

Please allow me to make this cautious remark more personal.

I am a real medical doctor with a prescription pad and my obligation to each of my patients is to provide them with the best that true medical science has to offer. As a licensed family physician for 20 years, taking care of mostly adults with chronic diseases, I realize that medications can sometimes be useful, and occasionally lifesaving.

In actual practice, for every new medication I prescribe, I stop a greater number of old medications. And for every medication that I stop, there are ten others I would like to stop, however the patient is

afraid to do so. Sadly, a great percentage of Americans have far more faith in drug medications than they do in the provisions of God's creation. This provides a formidable obstacle to the Lord's plan for healing and is the major reason for its apparent weakness. If this situation were reversed the miracles of healing and the vitality of our people would boggle the mind.

In a practical sense, on a day to day basis, we find ourselves suggesting that people stop taking their medications for three major reasons:

1) *They never needed them in the first place.*

The medication is doing nothing for the benefit of the patient. For example, many people have been prescribed blood pressure medications for blood pressure readings too low to show any real benefits (below 160/100mm Hg), and thus, there is no indication to treat them based on the research (please refer to the Q & A on page).

2) *The medication is doing more harm than good.*

For example, most diabetic medications cause more harm to the heart and liver

and other organs than the corresponding benefit yielded to the individual from the lower blood sugar.

3) *The principles of START NEW are more safe and effective.*

After a change in diet, some additional exercise, and better life habits, the indication for the medication has been eliminated.

As we develop the story, it might be helpful to place some economic context around the drug industry. Currently we spend about 2 trillion dollars on health care in America. That is about 16% or one-sixth of every dollar we spend in our country. We spend about 10% of that 2 trillion (or about 200 billion dollars) on pharmaceuticals annually with drug spending rising about 15% per year.

Sadly, hopeful patients are lulled into believing they will be saved by these miracle potions. Yet if the truth were known, many ill people might experience the healing the Lord wants to give by virtue of a healthy diet, exercise, and other simple habits, rather than waiting to be saved by these "technological breakthroughs."

Biotech stocks soar after cancer drug news

Study: Genentech's Avastin could extend patients' lives

Long suffering biotech investors might have felt as though they got Wall Street's version of a wonder drug Monday when good news on a lung-cancer treatment triggered the sector's biggest rally in 21 months.

Most of that came on the shoulders of biotech giant Genentech, which jumped \$10.92, or 25%, to \$55 in the last hour of trading after the company said one of its star drugs, Avastin, could extend some lung-cancer patients' lives by two months.

Why do we pay so much for so little, rather than pay so little for so much as the Lord freely offers?

Another example of this phenomenon is found in the area of cholesterol medications. Back a few years ago, we were perusing a report on the most 'successful' medications developed for cholesterol reduction called "statins." A very interesting picture emerged as we carefully studied the company's findings.

Their medication did seem to consistently and even impressively lower cholesterol levels. It also seemed to significantly, if less impressively, decrease the rate of heart attacks and even death from heart disease. The latter finding was the weakest of three. Good results, don't you think? Wait a moment the story was not finished.

The report, towards the end, revealed a few other results for this very popular and widely successful cholesterol medication. First, it significantly increased the rate of strokes, hepatitis, cancer, and accidents (?). Secondly, the rate of death for other causes except heart disease went up such that the overall death rate was the SAME! That is, the benefit of the drug for heart disease was perfectly counterbalanced by the negative impact of the drug every where else. The overall impact was statistically zero!

Let's give another illustration of this fascinating phenomenon.

About ten years ago, in 1998, the National Cancer Institute came out with some very exciting news. This news was jointly trumpeted as a major success by the Food and Drug Administration

Good

- ↓ Cholesterol levels
- ↓ Heart Attacks
- ↓ Death caused by Heart disease

Bad

- ↑ Strokes, Hepatitis, Cancer, Accidents, etc.
- ↑ Death by non -heart disease
- ↔ Overall Death rate?!?!

(FDA) and the pharmaceutical industry.

Enthusiastically, they broke the news of a research breakthrough in the treatment of Breast cancer. Tamoxifen, an anti-estrogen medication had been shown to decrease the rate of new breast cancer cases by 45%. The FDA spokesperson stated that "potentially tens of millions of women" could be candidates for Tamoxifen treatment.

Let's look at the details and see if this "breakthrough" is really that "good" and worthy of "tens of millions" of American women, each, spending over a thousand dollars per year and submitting themselves to the common daily side effects of this drug.

Like the cholesterol story, this research starts out mildly 'positive.' That is, it does show that for every 1000 women 17 cases of breast cancer are avoided and even that a small number of bone fractures are avoided. So far, so good. However, the additional

For every 1,000 women treated for 5 years:

- 17 breast cancers are avoided
- Reductions in bone fractures
- 12 additional cases of endometrial (uterine) cancer
- 10 additional 'potentially fatal' blood clots
- Increase in strokes and eye cataracts

cases of endometrial cancer, blood clots, strokes, and eye cataracts nullify the 'good' done for breast cancer.

Are we starting to see a pattern?

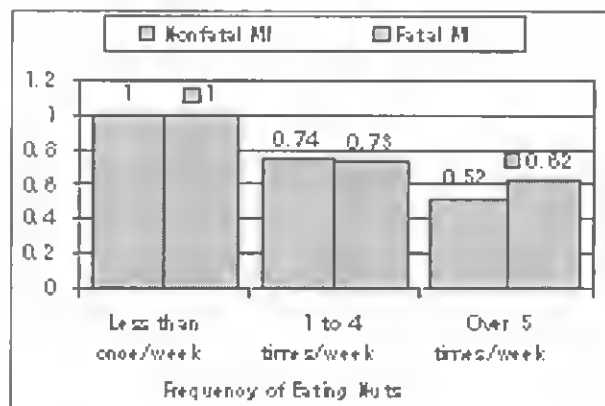
This pattern is imbedded within the pharmaceutical industry and can never be removed. We will describe it in simple words in just a moment, however, first let's draw a contrast with the Lord's provision for healing our body.

Thousands of years ago Hippocrates, the so-called father of medicine, was reported to have said "let your food be your medicine." Let's utilize wonderful and delicious nuts to prove Hippocrates right. In the study to the right, we see that those who ate a handful of nuts daily had 40-50% less heart disease and death from heart disease than those who did not. To the individual that is not allergic to nuts, we are not aware of any known side effects that would nullify this incredible benefit.

How can the drug industry compete with those kinds of results! Okay, so we want to get rich and maybe be a hero at the same time.

Our assignment is to:

- Create a drug that corrects a problem in our body ... without negatively affecting another part of the body.



- This is our mission if we choose to accept it.

- 100 years ago the pharmaceutical industry was born with the belief that drugs could be developed which cured disease with minimal if any side effects.

The Problem ... All parts of the body are interconnected!

Thus we find that drugs do not usually cure disease! In most cases, drugs ONLY change the form and location of disease. This is the key note statement of this study! Please read it over again.

Let's illustrate this principle with a very sad story from the 1980s. Back about 25 years ago there was a class of medications called antiarrhythmic drugs that were very popular. The concern was that folks who had certain kinds of irregular heart beats were at greater risk of dying. These medications, which are listed in the diagram to the right, were found to decrease the frequency of these irregular heartbeats. However, years later, very sadly, it was noticed that they also increased the rate of death.

Antiarhythmic Drugs (1980-90s)

Quinaglute, Norpace, Pronestyl

↓ irregular heartbeats,

But ... ↑ risk of death

The story was somberly reported in the Journal of the American Medical Association with the following quote: "There are estimates that **20,000 to 75,000 lives** were lost each year in the 1980s in the United States alone from inappropriate

administration of [class I] antiarrhythmic drugs." If these statistics are accurate then maybe 500,000 people (50,000 x 10 years) died prematurely from the common and standard care use of these medications by doctors who truly and sincerely believed they were helping their patients.

These kind of stories are occurring with increasing frequency over the past quarter century. The recent Vioxx news and subsequent litigation is an example. What's

the simple truth here, Vioxx was found to help with the pain of arthritis equal to the common and very inexpensive drug Motrin but maybe

with less stomach irritation (the studies of its relative gentleness in the stomach are very suspect!). For that reported benefit, backed by massive multi media marketing, it soon became a billion dollar drug. Oops, again! Subsequent research has found that Vioxx significantly increased the rate of heart attacks and strokes.

As we have been studying there is abundant hope for the alleviation of arthritis, tendonitis, headaches and virtually every other source of pain?

By the way, in all of these cases strong evidence has been produced that the pharmaceutical companies knew about these problems long before the public was notified.

The majority of those who suffer with chronic pain will gain significant relief or be cured in less than one month on an unrefined plant-based diet, which includes no processed foods (no sugar), dairy products, caffeine, tobacco, or alcohol.

Our favorite office suggestion is the ten day Daniel trial outlined in the diagram to the right. These changes, mixed with prayer and faith, have had awesome results. Praise the Lord!

Let's utilize the medication treatment of depression to develop some further principles that will provide us with a more balanced and

healthful approach to the usage of drugs. As we said in our initial comments, medications can sometimes be useful, and occasionally lifesaving.

Sadness, unhappiness, and depression can run the gamut from mildly annoying to totally disabling. These difficulties are so common, in our society, that the drugs used to treat them have become familiar to the extent that they are part of our pop culture language (the Prozac generation). Then also this has made these drugs extremely lucrative for the companies that sell them.

As we review the research, which is highlighted in the box below, we notice, first that the newer class of medications are far more expensive than the older class. Are they worth the money, that is, do they help more than the older drugs? Well, the research shows that for cases of severe depression, both the newer and the older drugs, are significantly helpful in about 40% of the patients, while placebos are helpful

Chronic Pain from ...

Headaches	<p>Often dramatically improves if we avoid:</p> <p>A) Dairy products</p> <p>B) Processed sugar</p> <p>(including sugar substitutes)</p>
Tendonitis	
Heel Pain	
Bursitis	
Back Pain	
Shin Pain	
Muscle Pain	
Joint Pain	

Try Daniel's 10 day experiment

in about 30% of the patients. Ugh. oh. Placebos, what are they?

Placebos are pills that contain no active drug, which are given to patients, who think they are getting a drug. Therefore, any benefit or reaction that is experienced is purely the result of the individual's expectations of the possible 'drug' effects. If the person has strong faith in the 'pill' then it might strongly and consistently have an effect. If the person has no faith in the 'pill' then it will correspondingly have little if any effect on them.

<u>Antidepressants</u>	
New Drugs (Prozac, Paxil, Zoloft, Wellbutrin)	
Old Drugs (Bavil) \$ = New drugs (Prozac) \$\$\$	
<u>Severe Depression</u>	<u>Mild Depression</u>
Placebos 30.9%	90% of studies
New Drugs 40.7%	New Drugs = Placebo
Old Drugs 41.7%	
Old Drugs more dangerous when overdosed	
New Drugs increase rate of death by suicide (2X rate vs. placebos)	

With that as background, what do we notice from our data box? Well, first, we notice that 75% of the benefit of the antidepressant drugs (30% vs. 40%), both new and old, is purely from placebo. That is that the active drug only helps an additional 10% of the patients beyond what the placebo would have done anyways. Stated another way, 10% of the patients were really helped by the drug, while 30% were better because of their faith alone, and finally a full 60% received no significant relief.

This is a common finding whenever placebos are studied. That is, the majority of the benefit of the drug is pure faith alone. Interesting and thought provoking, isn't it?

Now among the cases of mild

depression, which are the large majority of folks who suffer from depression, nearly all the studies show no benefit of the newer drugs over placebo. That is, over nothing!

Well, do these billion dollar drugs have any skeletons in the closet like the stories above? Yes, sadly they do. As we see they are associated with an increased rate of suicide as compared to the placebo pills.

These facts help us to understand an important medication principle:

■ In almost all cases, older drugs are as or more effective than newer drugs and have significantly less side effects.

■ In almost all cases, generic drugs (being the older ones) are better and rarely is the far more expensive name brand drug worth the extra cost.

Let's add a few more stories to further our keynote sentence, that in most cases, drugs only change the form and location of disease.

We have the story of hormone replacement therapy (HRT), which for about 30 years was very popular. Indeed, many believed that it was appropriate to recommend as standard treatment for all post-menopausal women. This is a curious recommendation when we consider that menopause is a normal life experience of all women. Rather than consider the possibility that the annoying side effects of hot flashes, night sweats and mood swings are caused by poor lifestyle habits, menopause was elevated to a disease process in need of drug therapy.

<u>HRT</u>	
■ Menopausal symptoms	↓
■ Hip fractures	↓ ⇄
■ Colon cancer	↓
■ Breast cancer	↑
■ Heart disease	↑
■ Strokes and blood clots	↑
■ Alzheimer's disease	↑
■ Osteoporosis	⇄
■ Death rate	↑

Well the result was predictable, as we might imagine. Yes, HRT did have some positive impact on hot flashes and night sweats, as well as maybe with bone health and colon cancer. However, it had a negative effect on the frequency of all the other problems listed in the data box to the right. This sad list has led "scientists to estimate that between 250 and 350 thousand American women developed breast cancer during the 1990s due to HRT."

Eventually, the medical societies reversed their three decades long push for HRT in 2002. Not surprisingly, the rate of breast cancer has been decreasing ever since!

Many more examples could be mentioned to illustrate the dilemma that faces those who venture into the field of pharmaceuticals. Remember the assignment:

Create a drug that corrects a problem in our body without causing other problems.

Mission Impossible!?!

Sadly, the cost of our collective folly into this field of human endeavor has been and continues to be very high. Back in the year

2000, one of the most well regarded voices representing the medical community, the *Journal of the American Medical Association (JAMA)*, in an article by Barbara Starfield, M.D., stating that physician error, medication error and adverse events from drugs or surgery **kill 225,400 people per year**. As they pointed out that makes our health care system the third leading cause of death in the United States, behind only cancer and heart disease.

As a physician, like all others dedicated by an oath to "do no harm," it is with great sorrow that we report that the largest category of deaths in the above group are the hospitalized patients who die from the "noxious, unintended and undesired effect of a drug," **which occurs at normal doses**. That is, even with the use of approved medicines, properly prescribed, and at correct dosages, over 100,000 people die every year from unintended reactions to the "medicine" that is supposed to be reviving their health.

The JAMA article went on to estimate that 2.2 million people a year have serious but nonfatal reactions to prescribed drugs. This is a terribly sobering number considering that 50% of all Americans now

START NEW	
Leading Causes of Death (2000)	
Cause of Death	Deaths
Diseases of the Heart	710,760
Cancer	553,091
Medical Care	225,400
Stroke	167,561
Chronic Lung Disease	122,009
Accidents	97,900
Diabetes	69,301
Influenza/Pneumonia	65,313
Alzheimer's Disease	49,558

START NEW	
Number Who Die From (Per Year):	
Medication Errors	7,400
Unnecessary Surgery	12,000
Other Preventable Errors in Hospital	20,000
Hospital Borne Infections	80,000
Adverse Drug Effects	106,000

take at least one prescription drug every day, and 25% of Americans take multiple prescription drugs every day.

We are not left without help in our time of need. There is a physician in Israel; there is a balm in Gilead

"[The Lord] forgiveth all thine iniquities; [the Lord] healeth all thy diseases;" **Psalm 103:3**

Virtually all diseases and the symptoms of ill health in our society are the result of not following the eight laws of health that God has established. Moreover, He is as willing today as He was 3400 years ago to "put none of these diseases upon thee, which I have brought upon the Egyptians; for I am the Lord that healeth thee." Exodus 15:26

Let's summarize the core conclusions in the arena of drug medications:

- In some serious or life threatening illnesses, drug medications are appropriate to use.
- However, in most mild or moderate illnesses the overall result of drug medications is negative.
- Sadly, greater than 90% of drug medications are used unnecessarily when the eight laws of health, rightly applied, would safely guide the person back to health and vitality.
- Drugs do not usually cure disease! In most cases, drugs ONLY change the form and location of disease.

START NEW

Diseases easily cured* with START NEW
Medications are reduced or discontinued under a
qualified doctor's supervision

<ul style="list-style-type: none"> ■ Obesity ■ Hypertension ■ Type-2 Diabetes ■ Arteriosclerosis ■ High cholesterol ■ High triglycerides ■ High uric acid ■ Nonopiate/migraine headaches ■ Sinusitis ■ Asthma ■ Indigestion (GERD), hiatal hernia ■ Abdominal pain ■ Cholecystitis 	<ul style="list-style-type: none"> ■ Constipation ■ Gout (Uric acid, Gout, BQ) ■ Chronic diarrhea ■ Menstrual disease ■ Inflammatory arthritis (rheumatoid, lupus, AS, Gout, nonopiate) ■ Multiple Sclerosis ■ Allergies ■ Kidney failure (early disease) ■ Nephritis ■ Hormone imbalances ■ Body odor ■ Oily skin and acne
---	---

* Progress of the disease is arrested, and in many cases reversal of the disease is experienced, with relief of signs and symptoms, however, residual damage is many times left from years of chronic injury caused by the disease processes.

In closing, consider the following words of wisdom, which summarize the thoughts above:

"The doctor of the future will give no medication, but will interest his patients in the care of the human frame, in diet, and in the cause and prevention of disease."

Thomas A. Edison (1847-1931)

"Go up into Gilead, and take balm, O virgin, the daughter of Egypt: in vain shalt thou use many medicines; for thou shalt not be cured."

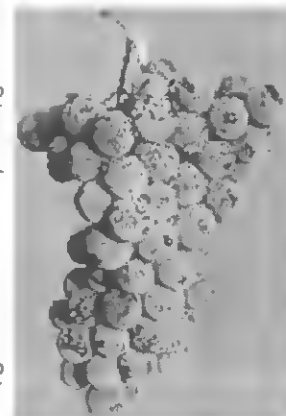
Jeremiah 46:11

"...and the fruit thereof shall be for meat, and the leaf thereof for medicine."

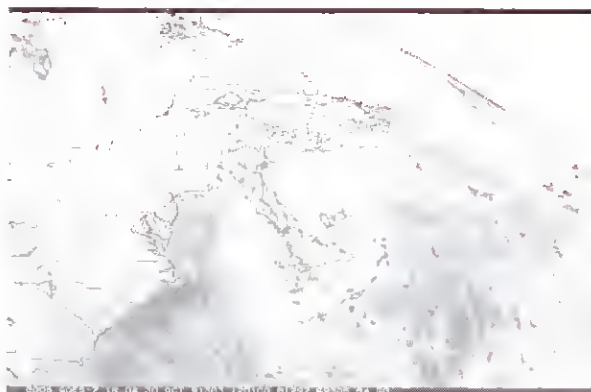
Ezekiel 47:12

"...and yielded her fruit every month: and the leaves of the tree were for the healing of the nations."

Revelation 22:2



The Perfect Storm

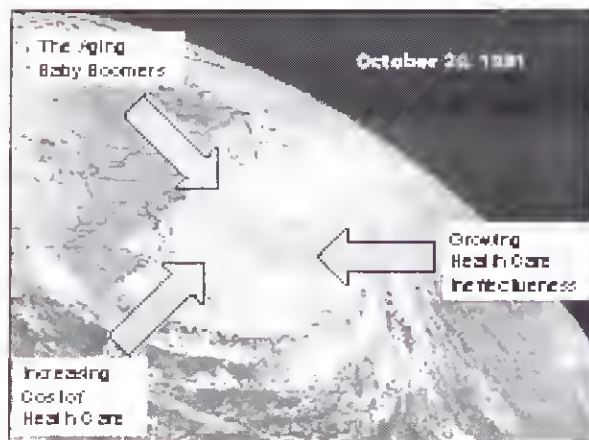


In October of 1991 a storm stronger than any in recorded history hit the coast off of Gloucester, Massachusetts. This "Perfect Storm" — so called because it was three storms combined into one — created an almost **apocalyptic** (the reporter's word) situation in the Atlantic ocean, where boats encountered waves of 100 feet (30 meters) — the equivalent of a ten-story building. This storm was one of the strongest and most terrifying manifestations of nature's strength.

The local meteorologists reported that they were tracking the remnants of Hurricane Grace that was beginning to die out in the Atlantic. At the same time, however, there was energy coming across from the Great Lakes, and an old "frontal system" that was around the New England area.

The energy from these three storms combined over time out in the Atlantic and thus was born the rarest of hurricanes dubbed the '**perfect storm**.'

The 1991 Halloween Nor'easter at its peak force stretched from the Labrador Coast down to Jamaica and was 2,000 miles across. It ravaged the Atlantic Ocean over



the course of several days, resulting in the deaths of several Massachusetts-based fishermen and billions of dollars in damage.

The phrase perfect storm refers to the simultaneous occurrence of events which, taken individually, would be far less powerful than the result of their chance combination.

Powerful forces are now converging to cause an unprecedented storm in the American Health Care System and God's Health message (STARTNEW) is the perfect antidote! The Lord has placed His people at the center of the health storm, that they might be a blessing, just prior to the storm of hatred that is soon to surround them.

Notice the three prongs or forces that are now converging to create the perfect storm in the medical care industry.

First, we have the aging, so-called, baby boomers, which born between 1946 and 1964, are the largest segment of the American population. Since sickness and its associated suffering are more common in the elderly, we can readily see the increase in health care costs associated with the baby boomers entering their 60s and 70s.

Second, the U.S. health care system is now siphoning off over 16% of our gross domestic product. With our current promises through Medicare and other government sponsored programs this number will continue to grow more rapidly than any other sector of our society.

Third, as we have been discussing our current health care system is overwhelmingly geared towards dealing with symptoms of disease rather than the real causes of disease. Every day there is growing awareness of the health care industry's impotence to reverse the growing epidemic of financial and physical burden caused by the American lifestyle.

What is the answer? The only solution that will solve the problem is one that **decreases** demand for doctors, hospitals, drugs, medical technology, etc. Controlling disease is not going to help. We are losing that battle, anyways! We need a solution that will **cure all forms of disease**. If we do not prevent and cure chronic lifestyle diseases, then diabetes, high blood pressure, heart disease, cancer, and dementia patients will overwhelm us in this generation!

START NEW

The Perfect Storm

The Health Message of the Bible is the perfect solution to the crisis of our time as well as preparing our families for eternity just ahead!

Further, as the "right arm" and the "entering wedge," it is the means by which many will come to **know the Lord as their best friend**.

Our new Health Care model must:

- Be simple for varied educational backgrounds
- Be inexpensive to teach and implement
- In the majority, prevent and cure all diseases
- Work in a public health model
- Be scientifically sound and verifiable
- Facilitate learning as well as lifestyle change
- Provide for relationships and the opportunity to love one another

STARTNEW was God's solution to the diseases of ancient Egypt just as it is His solution for Modern America!

Touch of the Master's Hand

'Twas battered and scarred, and the auctioneer
Thought it scarcely worth his while
To waste much time on the old violin,
But held it up with a smile.
"What am I bid, good folks?" he cried.
"Who'll start the bidding for me?
A dollar, a dollar—now two, only two—
Two dollars, once, three dollars, twice,
Going for three." BUT NO,
From the room far back a gray-haired man
Came forward and picked up the bow;
Then wiping the dust from the old violin,
And tightening up all the strings,
He played a melody pure and sweet,
As sweet as an angel sings.

The music ceased, and the auctioneer,
With a voice that was quiet and low,
Said: "What am I bid for the old violin?"
And he held it up with the bow.
"A thousand dollars—and who will make it two?
Two thousand—and who'll make it three?
Three thousand once and three thousand twice—
And going and gone!" said he.
The people cheered, but some of them cried,
"We do not quite understand.
What changed its worth." The man replied:
"The touch of a master's hand."

And many a man with life out of tune,
And battered and torn with sin,
Is auctioned cheap to a thoughtless crowd,
Much like the old violin.
A "mess of pottage," a glass of wine;
A game—and he travels on.
He's going once, and going twice,
He's going—and almost gone!
But the Master comes, and the foolish crowd
Never can quite understand
The worth of a soul and the change that's wrought
By the touch of the Master's Hand.

Myrna Brooks Welch

Substitutions for Better Food Choices

Instead of oil, butter or margarine in cooking and baking use:

- A little water for sautéing
- Blended nuts or nut butters
- Blended coconut
- Applesauce in baking
- Prune sauce/puree in baking (works well in cakes, muffins and cookies)
- “Better Butter” for spreading

Instead of milk, use:

- Commercially available soy, grain or nut milks
- Homemade nut milks (use in cooking and on cereal)
- On cereal, can also substitute fresh or canned fruit, stewed dried fruit, applesauce

Instead of cheese, use:

- Cashew pimento cheese (for eating, baking and spreading)
- Parmazano cheese (replaces parmesan cheese)
- Mashed tofu seasoned with onion powder, garlic powder, salt and basil (replaces cottage cheese or ricotta cheese in entrees)
- Or just omit the cheese. This can be done in many recipes

Instead of mayonnaise or sour cream, use:

- Tofu sour cream
- Nut based mayonnaise or sour cream
- Sunflower based mayonnaise or sour cream
- Marvi-Whip Mayonnaise

Instead of eggs in baking, use.

- 1/4 cup blended tofu for each egg (provides moisture and works as a mild binder)
- 1/4 cup flax gel for each egg white (works as a binder)
- 1-2 Tbsp. corn flour, garbanzo flour or soy flour for each egg (works as a binder in patties and loaves)
- 1/4 cup blended, soaked mung beans for each egg (works as a binder in patties and loaves)

Instead of white flour, use.

- Whole grain flours
- Whole-wheat pastry, barley and oat flours are lighter and good for baked goods, but not bread. Make our own oat flour in the blender with rolled oats.
- Whole-wheat flour is high in gluten and is good for bread making. It tends to be “heavy” in other baking.

Instead of sugar, use:

- Blended dates
- Blended bananas
- Date sugar
- Fruit juice or fruit juice concentrate
- Honey
- Date Sweetener (combine 3 sweeteners to mask the characteristic flavor of each)

Instead of baking powder or baking soda (sodium bicarbonate), use:

- Ener-G Baking Powder (made simply of calcium carbonate and citric acid, no aluminum or baking soda. Use 2 times as much as regular baking powder. Single-acting so bake immediately after mixing)
- Featherweight Baking Powder (No aluminum or baking soda, use 1 _ times as much as regular baking powder. Single-acting, so bake immediately after mixing)
- Rumford Baking Powder (Aluminum-free, but does contain baking soda, which can contribute to increased blood pressure, stomach irritation and decreased hydrochloric acid flow)

Instead of salad dressing, use:

- Fresh squeezed lemon and/or orange juice
- Sunflower sour cream thinned with water
- Guacamole
- Special salad dressing recipes
- Or learn to enjoy the flavors of food without salad dressing

Instead of refined, convenience foods and meats, use:

- A variety of fresh fruits and dried fruits
- Nuts and seeds (unsalted and raw or roasted without oil)
- A variety of vegetables
- Legumes (dried peas and beans)
- A variety of whole grains

Parmazano (adapted from *The Uncheese Cookbook*)

1/2 cup blanched almonds
1/4 cup nutritional yeast flakes
1/4 tsp salt

To blanch almonds, place them in boiling water for 1-2 minutes. Drain and rinse under cold tap water to cool. Pinch skins between thumb and forefinger at the base of each almond. Skins will slip off readily. Pat dry. Place all ingredients in a food processor or blender. Process for several minutes until the almonds are very finely ground. Store in a tightly sealed container in the refrigerator. Use like parmesan cheese.

Tofu Sour Cream

1 pkg tofu
2 Tbsp lemon juice
1 tsp honey (optional)

1/2 tsp salt
1 clove garlic

Combine all ingredients in blender. Blend until smooth. Add a small amount of water if needed to blend and achieve desired consistency. Chill. Use like sour cream or mayonnaise.

Sunflower Sour Cream

2 cups hot water
1/2 cup lemon juice
1 1/2 cups hot cooked millet
1 tsp granulated onion
1/2 cup raw sunflower seeds
1 tsp dill weed
2 tsp salt

Blend seeds, water and millet until satin-smooth. Add 1/2 cup lemon juice and turn blender off at the same time. Stir in seasonings as desired and refrigerate. Keeps up to 2 weeks.

Sunflower Sour Cream (Country Life Vegetarian Cookbook)

1 1/4 cup water
1 tsp onion powder
1 cup raw sunflower seeds
1/2 tsp garlic powder
1 tsp salt
1/3 cup lemon juice

Blend all ingredients on high 2-3 minutes until creamy. Yield: 2 cups.

Variations: 1) For a dressing increase water to 1 2/3 cups, onion powder to 1 1/2 tsp and decrease lemon juice to 3 Tbsp. 2) Blend in tomato and/or avocado for a salad or sandwich dressing.

Flax Gel

2 cups water
2-4 Tbsp flax seeds

In a small pot, bring water and flax seeds to a boil. Remove from heat and immediately pour mixture through a strainer and into a container. Cool and store the jelly-like liquid in refrigerator. Use as an egg white replacer and binding agent. 1/4 cup flax gel = 1 egg
Variations: 1) Can leave flax seeds with liquid for cookies, breads, loaves and other baking that you don't mind flax seeds in. 2) Can grind flax seeds before boiling if whole flax seeds not desirable in recipe. Do not strain before using.

Date Sweetener (Five Loaves Deli & Bakery cookbook)

1 cup date pieces
1 cup honey
1 cup apple juice concentrate
Place all in blender and blend smooth. Store unused portion in refrigerator. It will keep for weeks. If your date pieces are hard, you

may need to soften them by bringing them to a boil in a small amount of water before blending.

Unfamiliar Ingredients

Almonds: Nutritionally superior to cashews and peanuts. Raw almonds are used for milks and sauces. Raw almonds can be blanched by bringing to a boil, rinsing in cold water-then slip the skins off while wet, by squeezing between the thumb and finger. Available at natural food stores, bulk food stores and most grocery stores.

Almond Butter: Almonds ground to the same consistency as peanut butter. This can be purchased at most natural food stores. You can also make this at home with a Champion Juicer.

Almond Meal: Finely ground almonds, available at some natural food or bulk food stores. Generally costs less per pound than whole almonds, but can be difficult to find. You can make your own almond meal by grinding almonds in a blender or food processor.

Arrowroot Powder: Starchy flour from a tropical tuber used for thickening in the same manner and proportions as cornstarch. Arrowroot is not a refined product and has a better nutritive profile than cornstarch. Available in natural food stores and Asian markets. Arrowroot, like cornstarch, should be mixed with cold liquid, then added to other ingredients. Stir constantly to prevent sticking and lumps.

Baking Powder:

Ener-G: Made simply of calcium carbonate and citric acid. Use it in proportions about 2 times that of regular baking powder and bake soon after mixing as the rising begins as soon as it is mixed. Available in some natural food stores, or can be ordered by mail. Ener-G Foods, Inc., P.O. Box 24723, Seattle, WA. 98124, (206) 767-6660.

Featherweight: Contains no aluminum or baking soda. Use it in proportions 1 _ times that of regular baking powder. This like Ener-G is single acting and has to be baked soon after mixing as the rising begins when mixed. Available at natural food stores.

Rumford: This baking powder is preferable to regular baking powders in that it is aluminum-free though it does contain baking soda. Available at natural food stores and some grocery stores.

Barley: A whole grain that can be used in stews or as a cooked cereal. Available in many grocery stores with the rice and dry beans.

Barley Flour: A white, mild-flavored whole grain flour that performs well as a substitute for all purpose white flour in recipes such as pie crust, cakes, muffins and cookies. The gluten content is lower than wheat flour. Available at natural food stores, some bulk food stores, and in some grocery stores under Bob's Red Mill brand.

Bragg Liquid Aminos: An unfermented soy sauce substitute made from soybeans. It is high in amino acids and minerals, but lower in sodium than regular soy sauce. Available at natural food stores.

Brown Rice: Whole rice with only the hull removed. Unlike white rice, it still contains the nutritious and fiber-rich bran and germ. It is available as short-, medium-, and long-grain rice. Short rice cooks up sticky and long rice comes out fluffy. Available at most grocery stores.

Bulgur wheat: Precooked and dried cracked wheat. Gives a meaty texture to some entrees. Available at natural food stores, some bulk food stores and some grocery stores under Bob's Red Mill brand.

Carob powder: A dark brown cocoa-like powder made from the highly nutritious locust bean pod. It is high in calcium, phosphorus, potassium, iron, and magnesium. Tastes enough like chocolate to be used as a substitute. It is not bitter, so requires less sugar. It contains no caffeine, tannin or theobromine and has half the fat of chocolate. Available at natural food stores.

Cashews: All cashews called for in these recipes are raw. Do not substitute roasted cashews, the results will not be the same. Cashews are used in many vegan recipes because they are a soft nut and blend very smooth, giving a rich, creamy texture. This cashew paste can be used in many ways to take the place of milk, butter, and fat in recipes. Has thickening properties when heated. Cleaning is recommended before using. Simply place in boiling water for 30-60 seconds, then drain and rinse. Or rinse under hot tap water. Blanched almonds may be substituted for cashews in many recipes. However, the flavor and texture will be somewhat changed. Available at natural food stores.

Chicken Style Seasoning: An all-vegetarian seasoning widely used to give chicken flavoring to recipes. A variety of brands are available commercially (i.e. McKay's Chicken seasoning, Bill's Best Chik'nish seasoning) at natural food stores or a satisfactory seasoning can be made at home.

Chicken-Style Seasoning

1 1/3 cups food yeast flakes

1 tsp celery seed

3 Tbsp onion powder

2 1/2 Tbsp Italian seasoning

2 1/2 tsp garlic powder

2 Tbsp dried parsley

2 1/2 Tbsp salt

Blend all ingredients, except parsley, in blender until smooth. Stir parsley in.

Seal in airtight container. May use in the same proportion as McKay's chicken-style seasoning.

Cilantro: Bright green lacy leaves and stems of the coriander plant. Used in Asian, Italian and Mexican cuisine. It is also called Chinese parsley. Available in produce section of many groceries stores (next to the parsley).

Clear Jel, Instant: A pre-cooked starch derived from waxy corn. It thickens almost immediately upon contact with cold liquids. To prevent lumping, it is necessary to mix it with liquids in an electric blender. Usually available at a bakery supply house, but is carried by some natural food stores.

Coconut: Unsweetened shredded coconut is what is used in these recipes. It is usually only found in natural food stores or co-ops. Most coconut available in grocery stores is the sweetened variety.

Coriander and Cardamom: Can be used combined to give desserts a spicy flavor similar to cinnamon.

Corn flour: Finely ground corn makes a nice binding agent in roasts and patties to take the place of eggs. Available in some grocery stores under the Bob's Red Mill brand.

Dates/Date Pieces: Date pieces coated with oat flour can be used for cooking and baking. They are generally cheaper than whole dates. However, do not use date pieces with oat flour for almond milk, as the milk will sour quickly. Available at most grocery stores, but cheaper at bulk food stores.

Date Paste or Date Butter: Can be purchased at some natural food stores. Can be made easily from dates that have been simmered in water until soft and then blended until smooth. Use as a natural sweetener in recipes. Also a delicious spread on bread, waffles or muffins.

Date Sugar: A whole food sweetener made from ground dried dates and is used as an excellent substitute for brown sugar. Available at some natural food stores.

Ener-G Baking Powder: See Baking Powder

Flax Seeds: Small brown seeds rich in essential fatty acids. Available in natural food stores. Keep them refrigerated. Can be boiled in water to make a binding agent to replace egg whites in patties, loaves and baking.

Garbanzos: Also called chickpeas. In the legume family, easily recognized by their pea shape with a protruding shoot, beige color and nutty flavor. Available dried or canned.

Meat Analogs (meat substitutes): Made from soy, grains and vegetable proteins. Many brands and varieties available including vegetarian burger, hot dogs, patties, chicken, etc. MorningStar brand is commonly available in frozen section of most grocery stores. Meijer has a good selection in frozen foods and the produce section.

Milk Substitutes: A variety of "milks" made from grains, nuts or soybeans can be made or are available commercially. Both powdered and ready to use liquid forms are available. Most grocery stores carry some ready to serve varieties. Powdered forms and a larger selection are available at natural food stores.

Millet: Small golden whole grain kernels with a sweet nutty flavor. Rich in minerals and can be used like rice. Available at natural food stores.

Millet Flour: Finely ground millet. Available at natural food stores or grind your own millet in the blender.

Non-stick spray: Pam is a familiar brand, but many others are now on the market, including olive oil varieties. Used to give a quick, thin nonstick coating to pans or waffle irons and for spraying some foods prior to cooking.

Nutritional Yeast Flakes (food yeast): Are yellow and have a gentle cheese-like flavor. This product is similar to brewer's yeast but has a less bitter taste. Also available in powder form, but use only half as much. High in B vitamins. Available at natural food stores.

Oat Flour: Can be purchased or make your own by blending 2 cups of oatmeal in the blender until fine.

Pecan Meal: Finely ground pecans, much cheaper than pecan pieces. Store in refrigerator or freezer to prevent rancidity. Available at natural food stores and some bulk food stores.

Pimiento: Mild sweet red pepper, available in large cans. Measure out 1/4 cup portions and freeze in bags. Much cheaper than buying in small glass jars.

Roma, Postum, or Pero: Coffee substitutes made from roasted grains. Can be found at most grocery stores in the coffee section, or at health food stores.

Sesame Seeds: Hulled sesames seeds are white and have a milder flavor than the unhulled brown kind. Both are fine for cooking.

Soy flour: Good source of protein and B vitamins. Used as a binder or an egg and milk substitute in recipes. Available at natural food stores or at some grocery stores under Bob's Red Mill brand.

Sunflower Seeds: Raw unsalted sunflower seeds can be easily found in most natural food stores or bulk food stores.

Tahini: A thick, smooth paste made from ground sesame seeds. A staple of Middle Eastern cuisine. Joyva brand is best. Store in refrigerator after opening to prevent rancidity. Good source of calcium. Available at natural food stores and some grocery stores that carry ethnic foods.

Tofu: White, easily digestible curd made from cooked soybeans. High in protein, very bland in flavor. Available in 2 styles: 1) Chinese which is courser and finer in texture. Comes water-packed in plastic tubs. Once opened, should be covered with water. Water should be changed daily and torn used within a few days. 2) Japanese style or silken tofu comes in little boxes that don't need refrigeration, such as Mori-Nu brand. It is smoother, almost custard like and delicate. Both styles are available in natural food stores and the produce section of many grocery stores.

TVP (textured vegetable protein): Very low fat meat substitute made from defatted soy flour. Sold in dehydrated granular or chunk form. Available in beef, chicken or unflavored varieties. Must be rehydrated before use. Available in natural food stores and some grocery stores under Bob's Red Mill brand.

Vege-sal: a very nice vegetable seasoning that is handy to use when you're making any savory dish that needs more flavor. Found in natural food stores and Meijers.

Vegetarian Burger: Several burger substitutes are commercially available in canned, frozen, or dehydrated form. Made from soy, grains and vegetable proteins. Available in natural food stores. Morning Star and Green Giant frozen "burger" crumbles are available in many grocery stores.

Whole Wheat Pasta: Made from whole semolina wheat rather than refined semolina flour. Available at natural food stores.

Whole Wheat Pastry Flour: The best flour to use for most baked goods (excluding yeast bread) such as muffins, cookies, cakes and piecrust. Made from soft spring wheat, gives a tender product. Low gluten content. Available at natural food stores, some bulk food stores and some grocery stores under the Bob's Red Mill brand.

Ideas for Increasing Whole Plant Foods in Your Diet

1. Use more fruits, vegetables, whole grains, legumes and nuts. This will help crowd out food choices that are less healthy.
2. Look for substitutions. Experiment with replacements for refined or animal-based foods. Gradually change your diet as you find ones you like.
3. Remember the Good-Better-Best principle. Keep making better food choices until you are consistently choosing the best.
4. Experiment with plant-based meals. Substitute for meat dishes several times per week. Try one new recipe per week in order to gradually increase your repertoire of healthy meals

Breakfast

Build your breakfast around fruits and whole grains (cooked or dry cereals, bread, pancakes, waffles).

Alternatives to dairy milk on cereal:

Fruit Juice, Canned fruit, stewed dried fruit, applesauce, chopped fresh fruit, fruit salad, commercially available non-dairy milk products, homemade milk substitutes (nut, grain or fruit milks)

Dinner

Familiar entree ideas that easily use only plant foods:

Rice dishes- with vegetable toppings, casseroles, beans and rice, Spanish rice

Pasta dishes- with tomato or vegetable sauces, tossed with vegetables

Bean dishes-lentils, baked beans, beans and rice, chili, Mexican food

Soups-using vegetables, grains, beans

Vegetables-use a wide variety of vegetables, tastefully seasoned.

Supper

Make supper a very light meal. Fresh fruit, whole grain bread or crackers, popcorn.

Cooking Herbs

Basil	Sweet basil has anti-bacterial and insecticidal properties.
Caraway	The seeds have been used for the treatment of colic, nausea and indigestion.
Dill	Has an antispasmodic action, relieving spasm in the digestive tract. It enhances digestion, relieves indigestion, nausea, constipation, hiccoughs.
Fennel	Useful for colds and coughs and as a purgative. The seeds are safe to use but not the oil.
Flaxseed	Has anti-tumor and anti-inflammatory properties. Enhances immune functions. The flax meal is used as a base for poultices and the oil for softening the skin. Flax is a useful plant source of omega-3 fatty acids. Decreases total blood cholesterol and LDL cholesterol levels.
Garlic	Has natural antibiotic, antifungal, and antiviral properties when used internally and externally. Useful in the treatment of colds, flu, pneumonia, sinusitis. Stimulates the immune system. Helpful for arthritic pain relief. Promotes decrease in total blood cholesterol, LDL cholesterol and triglyceride levels. Decreases blood pressure as a result of vasodilator properties. Decreases platelet clumping, reducing risk of heart attack and stroke. Has an antihyperglycemic effect, facilitating lowered blood sugar levels. Significant cancer-protective and anti-tumor properties.
Onions	Decreases bronchial spasms, useful for the treatment of asthma and bronchitis. Useful in controlling blood sugar levels. Anti-clotting properties, suppresses the clumping of platelets. Cancer-protective. Stimulates the immune system.
Oregano	Has a high level of antimicrobial activity.
Parsley	Prevents the multiplication of tumor cells. It relieves gas, stimulates normal activity of the digestive system and freshens breath. Helpful for reducing urinary tract inflammations and to facilitate kidney stone removal. Beneficial for bladder, kidney, liver, lung, stomach and thyroid function. Good for high blood pressure and indigestion. Acts as a uterine stimulant. Pregnant women should avoid large amounts.
Peppermint	Antiseptic, antibacterial, antiparasitic, antifungal, antiviral, antispasmodic, decongestant. Promotes digestion and is an effective treatment for stomach cramps, intestinal gas and irritable bowel syndrome. Has anticancer activity.

Rosemary	Contains oils which are antiseptic, with antibacterial and antifungal properties which enhance the function of the immune system. It stimulates digestion, relieves gas. It is a powerful antioxidant. Has anticancer activity. Stimulates bile secretion and has anti-inflammatory properties. Gargle with rosemary tea to help heal mouth ulcers and canker sores.
Sage	Highly antiseptic, excellent remedy for colds, fevers, sore throats. Relieves tonsillitis, bronchitis, asthma, sinusitis. Antibacterial and fever reducing. Is estrogenic and beneficial for menopausal problems. Is cancer protective because it helps to reduce the harmful effects of free radicals. Used for the relief of itching and as an insect repellent.
Savory	Summer savory is a common garden plant belonging to the mint family. Has a mild antiseptic property, is useful for simple diarrhea. Savory tea is effective for the treatment of coughs and minor throat irritations and mild digestive complaints.
Thyme	A powerful antiseptic, antibacterial, and a strong antioxidant. Thymol is an effective ingredient in cough drops. It has a relaxing effect on the bronchial tubes and acts as an expectorant. Is cancer preventive.

External Use of Herbs

Aloe Vera	The fresh juice of the Aloe vera is reported to promote wound healing on external application and to have moisturizing properties. Simply cut off a 1/2 inch tip of the leaf and squeeze the gel from the center. A safe, soothing, effective and inexpensive treatment for minor skin complaints, such as: abrasions, frostbite, burns, poison ivy, rashes, itching, dry skin. The thick gel from the leaves can also be used as a shampoo for dandruff and other scalp conditions. The commercially processed forms of Aloe vera (gel, creams, liquid) have questionable therapeutic value. Internal use of Aloe vera is controversial and may actually cause nausea, vomiting and diarrhea.
Cabbage	White Cabbage leaves have a drawing effect on draining and infected sores. Wash cabbage leaf, break ridges and veins, dip leaf in warm water and apply over sores. Replace leaf when it feels hot.
Castor Oil	Has an anti inflammatory effect. Apply castor oil on a cloth over areas of inflammation, swelling and bruising.

Comfrey	Both leaves and roots contain a substance that helps with cell proliferation for rapid tissue healing, especially connective tissue, cartilage and bone. It is easily absorbed and transported through skin, tissues and cell membranes. Helps to alleviate bruises and disperse them by breaking down the red blood cells in the tissues. Effective in drawing inflammation and infection from wounds and burns while assisting with healing. A comfrey poultice will reduce swelling, heal skin tears and wounds. Use leaves or roots to make poultices. To use the leaves, apply either green mashed leaves or slightly moistened dried green leaves. To use the root powder, dampen with water until it forms a gummy mass. Place this mass in a clean cloth and apply to bruises, inflammations, ulcers and sores.
Eucalyptus Oil	Use in vaporizer or in teakettle for steam inhalation. Helps the body fight viruses in the respiratory tract.
Figs	Have a drawing effect on boils (see 2 Kings 20:7). Split a fig, heat it and apply to heal difficult sores or to bring boils to a head. This is particularly effective on boils on the gums.
Flaxseed	Makes a soothing, healing poultice for skin irritations. To release the linseed oil from the outer skin, soak flaxseeds briefly in boiling water or add boiling water to flax meal to make a slimy mass. Place in a clean cloth and apply to skin.
Garlic	Has antibacterial action and drawing power so it works well on external sores and infections. Garlic was used by the British to control wound infections during WWI, with no cases of sepsis. Place the crushed, raw bulb on a piece of gauze and place the gauze over the desired area. Can cause blisters if applied directly to sensitive skin. Garlic oil placed in the ear canal is helpful for earaches and infections.
Oatmeal	Apply warm cooked oatmeal directly on skin or encased in a cloth to relieve inflammation or to help withdraw foreign objects. Can be blended into a fine powder then added to bathwater or made into a paste for sores, inflammations, rough skin and to relieve the itch of hives or poison ivy. It will help soften and draw out splinters and other foreign objects.
Peppermint Oil	Mix a small amount in massage oils (such as olive oil) for pain relief. Increases blood flow in skin where it is applied.

Plantain	An invaluable first-aid medicine. Has some antibiotic effect. The leaves can be crushed and applied externally for the pain of stings and insect bites. Apply the leaves externally to sores or infections.
Potato	Apply raw, grated potato directly or in a clean cloth to a bruise, sprain, black eye, boil or carbuncle.
Slippery Elm	Powdered bark is excellent for use in poultices. It is very soothing and drawing as well. Make into a paste with a small amount of water and apply either directly to the body or contained in a clean cloth. Can be added to other herbs in a poultice to provide an additional soothing effect.

Use of Fresh and Dried Herbs

Making your own Herbal Teas

1. **Decoction** (an herbal tea using the solid parts of plants such as the nuts, roots, rhizomes, barks, seeds and heavy stems)
 - Use 1 tsp of plant particles for each cup of water.
 - Place plant particles in pan with water.
 - Bring to a low simmer for 10-30 minutes (smaller particles and powders require the least amount of time, larger particles require the maximum time not to exceed 30 minutes)
 - Strain out plant material
2. **Infusion** (an herbal tea using the aerial or the lighter and upper parts of the plant such as leaves, flowers, and thin stems)
 - Use 1 tsp dried material or 2 tsp fresh material for each cup of water. Pour hot water over tea material.
 - Steep for 5-20 minutes.
 - Strain out plant material.

Drying Herbs for Use in Cooking and Teas

Plant materials must be dried and stored properly in order to insure their potency. They should never be dried in direct sunlight; too much heat will drive off the volatile oils that are often times responsible for the flavor and effectiveness. Instead, they should be dried in warm, shaded, well-ventilated places such as attics or pantries.

1. A common method of drying leaves on long-stemmed plants is to tie the stems into loose bundles and hang them from the ceiling.
2. Another drying technique frequently used for bulkier plant materials (flowers, etc), is to spread them in a shallow layer on a horizontal window screen. The screen should

- be raised above the floor on two supports in order to insure maximum air circulation.
- 3. You may also dry them in the oven on the lowest temperature with the door propped part way open.
- 4. A food dehydrator may also be used.

Once herbs have been thorough dried, they will keep for months if sealed in airtight containers and kept out of the direct sunlight. It is best to store them in glass jars in a cool, dark place. Many herbs can be kept for up to one year.

Freezing Herbs for Cooking

Preserve herbs for use in soups and other dishes by freezing them in water. Simply place your chopped herbs in an ice-cube tray, fill it with water, and freeze. Then remove them, and store in airtight bag or container.

Phytochemicals

Phytochemicals are naturally occurring substances in plants that provide color, texture and flavor.

- Provide a defense mechanism for plants against insects, viruses, etc.
- Also provide a defense mechanism for our bodies when consumed.
- Protect against cancer by 1) blocking hormone actions and metabolic pathways associated with development of cancer, and 2) stimulating protective enzymes.

In natural/plant foods, color means protection due to a greater amount of phytochemicals

- Deep colored vegetables and fruits
- Outer leaves (10-60x more flavonoids than inner leaves)
- Skins of fruits and nuts (8-10x more flavonoids than pulp)
- Seed coat of legumes
- Whole grains (phytochemicals are in the bran and germ)
- Increased ripeness

Flavonoids

- Benefits: Decreased risk of heart disease, stroke and cancer, decreased blood clot formation.
- Actions: Antioxidant, protects LDL cholesterol from oxidation, inhibits platelet aggregation, anti-inflammatory, anti-tumor.
- Sources: Red grapes, grape juice, apples, onions

Carotenoids

- Benefits: Decreased risk of cancer and heart disease, slows age-related declines in cognitive function.
- Actions: Antioxidant, stimulates immune function
- Sources: Yellow-orange vegetables and fruits, green leafy vegetables, red fruits

Lycopene Red pigment, a type of carotenoid

- Benefits: Decreased risk of prostate cancer
- Actions: Anti-tumor activity, antioxidant
- Sources: Tomatoes, pink grapefruit, watermelon, guava, strawberries

Lutein A type of carotenoid

- Benefits: Decreased risk of colon cancer
- Sources: Green peas, green beans, green leafy vegetables

Lignans

- Benefits: Inhibit breast tumors, decreased risk of endometrial cancer
- Action: Metabolized to compounds that bind to estrogen receptors
- Sources: Flax seed, soy beans, sesame seed

Phenolics include ellagic, ferulic and caffeic acids

- Benefits: Decreased rates of heart disease and cancer
- Actions: Powerful antioxidants
- Sources: Berries, grapes, nuts, whole grains

Soy Foods contain phytates, protease inhibitors, phytosterols, saponins, isoflavonoids

- Benefits: Decreased incidence of cancer, decreased total and LDL cholesterol
- Actions: Anti-cancer activity, inhibits growth of tumors, blocks cholesterol absorption, increases cholesterol excretion.
- Sources: Soybeans, tofu, soy products

Nuts Low in saturated fat, high in monounsaturated fat, high in dietary fiber and cancer preventive phytochemicals.

- Benefits: Decreased risk of heart disease, decreased incidence of cancer

Garlic, onions & other members of Allium family

- Benefit: Decrease the tendency of blood clots to form, lower total and LDL cholesterol, decreased risk of cancer.

National Cancer Institute's List of Cancer-Protective Foods

Garlic, onions, soybeans, ginger, licorice root, the umbelliferous vegetables (carrots, celery, cilantro, parsley), flax seed, citrus, turmeric, cruciferous vegetables (broccoli, Brussels sprouts, cabbage, cauliflower), tomatoes, peppers, brown rice, oats, whole wheat, herbs of the mint family (rosemary, thyme, oregano, sage, basil) cucumber, cantaloupe, and cabbage

American Institute for Cancer Research's List of Most Protective Foods to Prevent Cancer

1. Deep green leafy vegetables (kale, collards, broccoli, spinach)
3. Highly salted foods
2. Deep yellow or orange vegetables (winter squash, carrots)
3. All the allium containing foods (leeks, chives, garlic, onions)
4. Citrus fruits (oranges, lemons, grapefruit)
5. Red Fruits and vegetables (tomatoes, beets, raspberries, strawberries)
6. Legumes (beans, peas, soybeans, pinto beans, red beans)
7. Whole grains (whole Wheat, barley, oats)

American Institute for Cancer Research's List of Foods which Increase Risk of Cancer

1. Barbecued foods
2. Pickled foods sprouts
4. Smoked meats
5. Processed meats
6. Meats high in saturated fats
8. Cooked meats
9. Full fat dairy products
10. Egg Yolks

U.S. Dept. of Agriculture's List of High Antioxidant Foods

1. Onions and garlic
2. Broccoli and alfalfa
4. Turnip greens
5. Broccoli
3. Red peppers and red beets
4. Cauliflower and cabbage
5. Carrots and winter yellow squash
7. Red meats

U.S.D.A.'s Top 20 List of Nutritive Vegetables

1. Kale
2. Spinach
3. Mustard
6. Butternut squash
7. Leaf lettuce
- 8.
9. Okra
10. English peas
11. Snow peas
12. Cauliflower
13. Collards
14. Southern Peas
15. Asparagus
16. Carrots
17. Acorn squash
18. Pumpkin
19. Chinese berries
20. Sweet Potatoes

Start

Basic Training

Beloved, I wish above all things, that thou mayest prosper and be in health, even as thy soul prospereth. 3 John 2.

START NEW is an acronym that stands for God's eight laws of health (see below). It is the locomotive of a healthy lifestyle. The more we incorporate these 8 laws of health into our lives, the greater the health benefits we will experience. These benefits can include: normalizing your blood pressure, lowering your cholesterol, stabilizing your blood sugar, losing weight naturally & keeping it off, reducing or eliminating your medications, finding rest in stress and living a healthier & happier life.

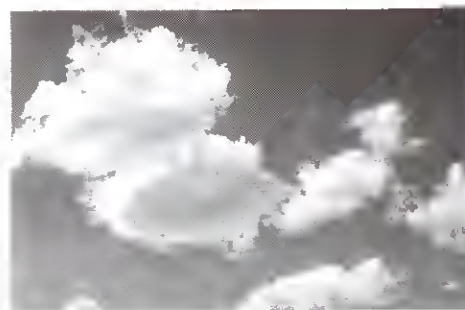
■ **Sunlight:** Sunlight strengthens the body and the immune system, destroys viruses and bacteria, improves the circulatory system, gives a healthy tone to the brain and nervous system, improves our mental outlook, and helps alleviate fatigue. If possible try to get 30+ minutes of sunlight daily, or at least several times a week.



■ **Temperance:** Temperance also means to be moderate in everything that is good, such as not overeating or getting too much sunlight, resulting in sunburn. It also means to stay away from that which is harmful to the body. This includes various beverages (alcohol, coffee, wine, caffeine-containing drinks) and other substances (tobacco in all its forms, drugs, etc.). These items are very harmful to the liver, nervous system, brain, lungs, cardiovascular system, and impairs other body functions.



■ **Air:** Without sufficient oxygen brain cells die in about four minutes, body functions stop, and the heart stops beating. Polluted air carries many poisons and toxins that destroy health; many illnesses and deaths have been attributed to polluted air alone. Pure air, both indoors and out, is what we need. Try to get outdoor air as often as possible. If you live in the city, take advantage of the times of less pollution to go outside, and go to the country as often as possible where the air is much cleaner. Be sure to breathe deeply. Exercise and good posture facilitate proper intake of oxygen. Open the windows to your home whenever conditions permit. Pure air gives life to the body, purifies the blood, and vitalizes every organ and cell.



■ **Rest:** Rest (sleep) and relaxation gives the body time to replenish energy reserves, make needed repairs, and remove waste from the cells. Without sufficient rest stress is not handled as well and the mind and body are less efficient. Most people experience best results with seven to eight hours of sleep a night. For best sleep, follow the other seven aspects of this formula, do not eat late, and have a regular time for bed. The best sleep is obtained before midnight. Relaxation can be obtained in enjoying nature, doing a hobby, taking a vacation, or even spending time with your family or friends.



■ **Trust in God:** Peace of mind only comes through trusting in God. There is a profound connection between the mind and the body. Worry, anger, jealousy, resentment, guilt, depression, anxiety, and all other negative emotions have a negative effect upon the body; they break down the life forces and open the door for sickness and disease. We not only worry with our minds, but we worry with every cell in our body as well. King David stated a deep truth when he wrote, A merry [cheerful, rejoicing, thankful] heart doeth good like a medicine; but a broken spirit drieth the bones." Prov. 17:22.



■ **Nutrition:** There are four basic guidelines or principles of a good, healthy diet. These guidelines outline a nutritious maintenance diet which will promote health for the rest of our lives, as well as form the basis of a therapeutic diet for those who are battling with health problems. These are the guidelines for a good diet: 1) A diet high in complex carbohydrates 2) A diet high in fiber 3) A diet low in protein 4) A diet low in fat.



■ **Exercise:** Our bodies are designed for activity, and if we are not sufficiently active, degeneration and loss of body tissue and function result. Exercise increases circulation; strengthens the cardiovascular system, bones, organs, and muscles (thus you have more energy); improves mental attitude and relieves stress; and helps in the elimination of wastes. Walking is a wonderful way to start an exercise program. For those physically capable, many other forms of exercise may be chosen. For best results exercise should be at least 30 minutes per session and at least three times per week. Excessively vigorous exercise is not necessary and should not be done by those starting an exercise program or those with medical conditions. However, you should observe an increase in your breathing rate and your heart should be beating faster.



■ **Water:** Without water blood would not circulate in our blood vessels, our joints would not move, and we would not be able to eat properly. Water purifies the blood and aids in the elimination of waste. Water plays an important part in virtually every body function. Most body fluids are primarily composed of water. Even cells contain a large amount of water. Thus it is necessary that the body receives an abundant supply of clean, fresh water daily. Every day we need to drink approximately eight cups of clean, fresh water (not soda pop, juice, or coffee). This water should be taken between meals because drinking with meals hinders digestion. Drink water up to 15 minutes before a meal and one hour after a meal.



Spiritual Nugget Overview

God's Sweet Remedy



If someone were to ask you the question, "In the entire universe, what is God's most prized possession?" how would you answer them? Did you know that the Bible declares that God considers you His most prized possession? He actually calls you the "apple of His eye." Zechariah 2:8. He knows everything about you, right down to the number of hairs on your head. Luke 12:7. He is like a loving parent, watching and

waiting to encourage and help you every step of the way.

"For I know the thoughts that I think toward you, says the LORD, thoughts of peace and not of evil, to give you a future and a hope." Jeremiah 29:11. The Bible tells us that God has developed a special plan that is unique to each individual and He is waiting only for our cooperation to bring it to pass.

"Beloved, I pray that you may prosper in all things and be in health, just as your soul prospers." 3 John 2. Within this special plan He has a dual purpose. He wants to heal us, not just physically but spiritually also. He wants to give us health for a lifetime and hope for eternity.

"He who did not spare His own Son, but delivered Him up for us all, how shall He not with Him also freely give us all things? Romans 8:32. The Bible also tells us that God will withhold no blessing from those that live for Him. He will pour out every resource in Heaven to ensure the success of His plan for us, even giving us the life of His Son as proof of this fact.

"According to your faith let it be to you."
Matthew 9:29. As we begin to infuse the lifestyle principles of START NEW into our lives, God tells us that our success will be directly tied to our faith in Him and His Word. So our faith in God will be the "key" to our healing. Faith gives us the victory!

Our prayer is that this series of eight studies called "God's Sweet Remedy"

will provide you with enough evidence to recognize that God loves you with an everlasting love and that He will never leave you nor forsake you even for a moment. That God always stands at the ready to provide His healing grace to pervade your life in ways you may have never known before. That God is worthy of your faith and love.





1. The Way Out. Read Exodus 2:23.

The Israelites were slaves in Egypt for over 400 years...

Notes:

“... If thou wilt diligently hearken to the voice of the Lord thy God, and wilt do that which is right in his sight, and wilt give ear to his commandments, and keep all his statutes, I will put none of these diseases upon thee, which I have brought upon the Egyptians: for I am the Lord that healeth thee.” Exodus 15:26

2. Diseases in Egypt.

Over 36,000 autopsies have now been performed upon the mummies of Egypt...


Notes:



3. God's Prescription. Read Exodus 15:26.

The remedy that God chose to deliver them from these diseases was... **START NEW.** Yes, **START NEW** Basic Training is actually based upon the Bible!

Notes:

	Remember that START NEW is an acronym that stands for God's 8 laws of health. It is the locomotive of a healthy lifestyle. The more we incorporate these 8 laws of health into our lives, the greater the health benefits we will experience. God's 8 laws will supercharge your immune system, help you avoid disease, enjoy peak health and energy, and add years to your life...
"S" stands for:	Notes:
"T" stands for:	Notes:
"A" stands for:	Notes:
"R" stands for:	Notes:
"Y" stands for:	Notes:
"N" stands for:	Notes:
"E" stands for:	Notes:
"W" stands for:	Notes:

4. Did the Prescription Work? Read Psalm 105:37.

Did the plan work? David shares an evaluation of the tribes after 40 years and "There was not one feeble person among them!"

Notes:

5. Still Relevant Today? Read Psalm 34:8.

There is a story of a very eloquent speaker, who spoke at a large convention for over two hours proving that the resurrection of Jesus was false.

Notes:



"Taste and see that the Lord is good..." Psalm 34:8.

Real World Words - The Power Source - Lesson 2



1. What is faith? Read Hebrews 11:1

Notes:

The English translation of this text uses the word “*substance*,” a Latin based word derived from the Greek word “*hypostasis*.” Let’s do a little word sleuthing and discover what the words mean in English. *Hypostasis* has two parts, the first being hypo, meaning “low” or “under,” as in hypodermic injection (under the dermis/skin). The second part, stasis. Means “standing” or “standstill.” *Hypostasis* was translated into Latin as “*substance*.” The first part of the word, sub, indicated “under,” as in subway or subterranean or submarine, and the latter part, stance, means “standing.” So the word “*substance*” in old English means “*understanding*.”



2. Faith and knowledge. Read Hosea 4:1, 6.

Notes:

Faith has nothing to do with the gift, it has to do with the giver. If you trust the giver, then the gift has value. No trust... no value. Your trust is built upon your understanding or knowledge of the giver. If you have little or no understanding of the giver's true character to base your faith (trust) upon, the gift (whatever it is) will be useless.

3. How can we know God? Read Romans 10:17, John 1:14, 14:9.

Notes:

4. Knowledge leads to love. Read Galatians 5:6, 1 Corinthians 1:18.

The word "working" in this Galatians 5:6 is the Greek word *energeo*__ from which we get the English word energy. So the text literally reads that faith is energized by love. So God says that knowledge of His love will energize or empower our faith.

Notes:



5. Love the energizer. Read Psalm 40:8, Romans 8:32, 6:23, Psalm 130:3-4, 2 Corinthians 5:19.

What makes the cross so powerful? What makes the cross the ultimate evidence of God's love for us? It's because every question about God's character can be answered at the cross.

Notes:



6. Paid in full. Read Matthew 7:11.

There is no greater evidence of His love that God could have given us than the gift of His Son Jesus Christ.

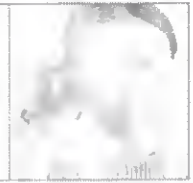
Notes:

7. The perfect power source. Read Hebrews 12:1-2, 1 Corinthians 13:8.

"Love never fails." 1 Corinthians 13:8. God's love is the perfect power source for our faith, because God's love never fails. Look and see for yourself!

Notes:

8. Homework assignment: In the space below, list 10 ways that you can see the love of God in your life:

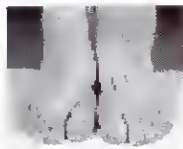


It began in the Philippines on May 4, 2000, and spread across the whole world in one day (traveling from Hong-Kong to Europe to the United States), infecting 10% of all computers connected to the Internet and causing over 10 billion dollars in damage. The Pentagon, CIA, and the British Parliament all had to shut down their E-mail systems to get rid of this virus as did most large corporations. An international manhunt for the perpetrator finally led authorities to a young programming student named Guzman.

1. Walking with God. Read Genesis 3:8.

Each day after creation, God would come and walk with Adam and Eve in the cool of the day...

Notes:

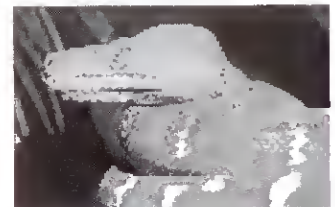


2. Where are you? Read Genesis 3:8-10.

Notes:

3. Rewind the Tape. Read Genesis 2:15-17.

Satan's objective was to lead Adam and Eve into sin by misrepresenting God's character. Three key lies of Satan composed the deception:



1st Lie: God is arbitrary and He has restricted your freedom. You are nothing but slaves.

The serpent was clever; more clever than any wild animal God had made. He spoke to the Woman: "Do I understand that God told you not to eat from any tree in the garden?" Genesis 3:1

2nd Lie: God is a liar. You won't die if you eat from this tree.

The Woman said to the serpent, "Not at all. We can eat from the trees in the garden. It's only about the tree in the middle of the garden that God said, 'Don't eat from it; don't even touch it or you'll die.'" The serpent told the Woman, "You won't die." Genesis 3:2-4

3rd Lie: God is self-centered. He doesn't want you to become like Him. He doesn't have your best interests at heart.

The serpent told the Woman, "You won't die. God knows that the moment you eat from that tree, you'll see what's really going on. You'll be just like God, knowing everything, ranging all the way from good to evil." Genesis 3:5

4. The blame game. Read Genesis 3:8-13.

Notes:



5. Satan's objective. Read 2 Corinthians 4:3-4.

Satan's objective is to blind our minds to the truth about God as we see in Jesus. Satan doesn't care if we boldly rebel against the love of God in reaction to this false image, or if we strive to serve God as fear motivated slaves. In either case the true God is neither known nor worshipped. God has been, in modern day computer lingo...Hacked!

Notes:

6. Satan's desire. Read Isaiah 14:13-14.

Notes:

7. So what can God do?

God's identity, His true character has been hacked, stolen and misrepresented by Satan, and this controversy has now raged for over 6000 years. What can God do? How can God share His true character with humanity, destroy all Satan's misconceptions and establish the trust needed to win our hearts and minds back to Him?

Notes:

8. Homework assignment:

In the space below, list 10 ways that you can see how Satan has blinded us from the truth about God's character:

1. What's your picture of God like?

Notes:



2. God had a plan. Read Revelation 13:8.

Notes:

3. God's self portrait: Jesus. Read 2 Corinthians 4:3-4, 6.

A photo of the Lord would be helpful, don't you think? Then we wouldn't have to guess or go by what others say about Him. Well, believe it or not, God has sent us a photo of Himself. It's not a picture of His face, however. It's a picture of His character.

Notes:

4. How far would God go? Read John 17:3-4, 6.

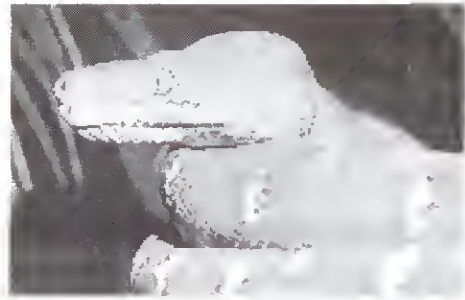
Notes:



Eternal life is a life that gets its quality from knowledge of the true character of God.

5. The Cross of Christ:

If the cross of Christ is the ultimate evidence of God's character, then all of Satan's claims about God should be refuted there. Let's find out...



Satan's claims in the Garden were:

1st: God is arbitrary and you are nothing but slaves because He restricts your freedom. Read Psalm 40:6, 2 Corinthians 5:19 & John 8:32.

2nd: God is a liar. You will not die if you choose to eat of the tree. By implication of these claims we could also add that: if they did die, then it was an act of God Himself and not because of their choice. He is the one who would be responsible. God will kill you if you sin. And if you decide to serve Him, you will only be able to serve Him from fear. Read Mark 15:34, James 1:15 & Romans 3:23.

3rd: God is self-centered. He only has His own interests at heart. Read John 3:16-17 & Jeremiah 31:3.

4th: God is unforgiving and deserves all the blame. Read Luke 23:34 & Romans 3:32



6. God's Portrait of Love. Read John 14:9.

When Christ had answered all the questions about God on the Cross, He said "Father into your hands I commend my spirit." As Jesus experienced this awful death - no matter how hopeless it looked to Him – He trusted God's word. This is the "Faith of Jesus." We all need that kind of faith, a faith that trusts in God no matter what.

Notes:

7. Homework assignment:

In the space below list 10 blessings from God that you received this week:

1000 Names Prayer - Audio It Be That Simple - Lesson 5



1. God's plan of healing. Read 3 John 2, Matthew 1:21, Acts 4:12.

Notes:

The Greek word for the word "save" in the text above is "sode'-zo." It is pronounced "so_zo_." It means to "save" or to "heal." The words are interchangeable.

2. How does He do it? Read John 3:14-15

Nicodemus who was a member of the ruling body of the Jews during the time of Jesus. He decided to covertly meet with Jesus at night in a garden, so that He wouldn't be seen. Jesus immediately seized this moment to share the truth about eternal life with Nicodemus.

Notes:

3. God's chosen remedy. Read Numbers 21:4-9

"...So Moses prayed for the people. Then the LORD said to Moses, "Make a fiery serpent, and set it on a pole; and it shall be that everyone who is bitten, when he looks at it, shall live." So Moses made a bronze serpent, and put it on a pole; and so it was, if a serpent had bitten anyone, when he looked at the bronze serpent, he lived." Numbers 21: 7-9



Notes:

4. What does it mean to look? Read Isaiah 45:22, Hebrews 12:2, John 5:39, 1 Timothy 4:15.

Though faith and belief are sometimes difficult concepts to understand, the words “look” is easy to understand. We instinctively grasp what it means to turn our eyes and look. Yet how can we look at God?

Here are a few suggestions:

A.) Ask Questions: Who, what, when, where and why? Who is speaking in this verse? What is the major point? When and where was this taking place? Why is this important?

B.) Key Words: What meaning does each key word contribute to the verse? Are there other words that mean the same thing, but give you clearer insight into what the verse really means?

C.) Connections: How does this verse shed light on other verses and principles that you already understand? The more you read and understand, the more exciting the connections will come!

5. What does it mean to live? Read James 1:22

Meditation should always be combined with personal application. Application is simply taking the principles you see in a verse and then finding ways to implement them. You infuse or integrate them into your lifestyle. You put the principle into action in your life. It becomes part of who you are and what you believe. Here are a few suggestions to get you started:

A.) Goals: Does this verse have any bearing on my current goals? Your direction in life? The things you are working toward? Perhaps it will suggest ways to move forward toward a goal? Altering a goal? Or even eliminating a goal?

B.) Decisions: All of us face challenging decisions at times. Does this verse shed light on any decisions you are facing? Does it point to some choice you should make?

C.) Lifestyle: Think through your daily schedule. Your habits, patterns and routines. Can you think of ways to change your lifestyle that would bring it more into harmony with the verse you are meditating upon?

D.) Problems: Are you experiencing any difficulties or irritations? Perhaps this verse suggests solutions?

6. It can't be that simple. Read 2 Kings 5:9-16

Notes:



7. Healing (both physical and spiritual) is a free gift from God. Read Ephesians 2:8

Notes:

8. Homework assignment:

In the space below or on another sheet list 10 ways God has given you grace in your life:

War of the Worlds - Lesson 6

1. So the stakes are high, and the ultimate question for us to answer right now is, "How does Satan blind us from seeing the truth about God?" Read Isaiah 14:13-14.

Notes:

2. But this war of the worlds is not being fought any longer in Heaven, it's being fought here on earth. So where is God's throne here on earth?

Notes:



3. The Frontal Lobe:

- Determines how we relate to the world around us.
- Determines who and what we are as people.
- Gives us the ability to understand abstract thinking.
- Is the critical component in our brains that determines all issues of right and wrong, morality, spirituality, judgment, the understanding of principles, creativity, math, the will, and wisdom.
- Gives us the ability to have foresight, the capacity to understand the concept of the future.



4. So how does Satan bypass our frontal lobes?

- A. _____ B. _____
 C. _____ D. _____
 E. _____ F. _____
 G. _____ H. _____

Satan's objective is to confuse, paralyze and bypass our frontal lobes so that we cannot discern the truth about God's character as it is in Jesus.

5. How does God protect us?

- A. _____ B. _____
 C. _____ D. _____
 E. _____ F. _____
 G. _____



God's objective is to protect our frontal lobes through His 8 laws of health, so that we can fully discern the truth about God's character, and choose to accept Him as our Saviour and Friend.



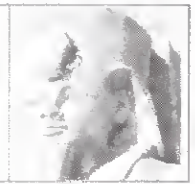
6. No need to worry! Read John 16:33.

Notes:

7. Homework assignment:

List at least 5 ways below how you can stop Satan from having access to your mind:

12. The Possibilities - Lesson 7



The Israelites had been slaves in a foreign land for over 400 years and now were camped on the borders of the promised land, freed from slavery by another mighty miracle of God.

Twelve men, one from each of the twelve tribes have been hand picked by Moses to go and search out the land ahead of them. The land that God had promised them. A land flowing with milk and honey. But would they believe God's promise?

1. A story of possibilities. Read Numbers Chapters 13-14.

Notes:

2. So why did they fail? Read Hebrews 3:19.

Notes:

3. What can we learn from this story? Read Hebrews 4:2.

Notes:



My wife bakes bread every Monday morning. When I get home from swimming with my son, the first thing we smell when we get into the house is the smell of fresh baked bread. It smells heavenly! When my wife Debbie makes bread, she first gets the grain and grinds it in the Whisper Mill. She then adds all of the ingredients (water, honey, etc) and mixes them all together. Although every ingredient is important, the most important is the yeast, because it activates the entire mix to develop into a loaf of bread.

4. Why should we trust God? Read Romans 8:32.

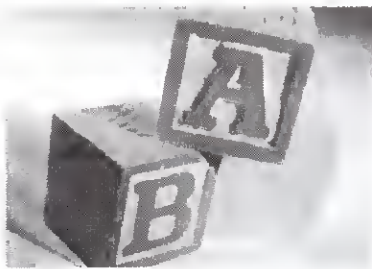
Notes:

5. George Mueller: A man of faith.

George Mueller was most well known for the orphanages that he began for destitute children in England. The work of helping orphan children find their way in life was a success from the beginning. At times in his ministry, Mueller had over 2000 children staying in his orphanages. From the time the first orphanage was built until his death, over 10,000 children passed through the orphanages and called him Daddy Mueller. He not only brought them in off the streets, fed and clothed them, but he shared with each of them about a God of love. Many of the children gave their hearts to Jesus because of the love shown to them by Mueller and his staff. Mueller did all this without asking anyone but God for the financial support needed to fund such a large outreach, yet he raised over 8 million dollars, which would translate into billions in today's economy. George Mueller was truly a man of great faith. But how did he get to the point in his life, that he trusted God's word to do what it says it will do?



George Mueller
1805-1898



6. So how did George Mueller pray?

Ask – Ask, and it shall be given you; seek, and you shall find; knock, and it will be opened unto you. Matthew 7:7.

Believe – Therefore I say to you, whatever things you ask when you pray, believe that you receive them, and you will have them. Mark 11:24.

Claim – Then they took away the stone from the place where the dead man was lying. And Jesus lifted up His eyes and said, "Father, I thank You that You have heard Me. John 11:41.

Sample Prayer Using Philippians 4:13

Father... You have promised that we can do all things through Jesus who strengthens us. We are asking that you help us to (insert the need). We believe that you will answer this request because we have already seen the evidence of your love for us in the cross of Christ. Now we thank you for answering this prayer for us, and we claim that it is now a reality in our life through faith alone. In Jesus name... Amen.

7. What happened to Caleb? Read Joshua 14:6-15.

Notes:

8. Homework assignment.

Practice writing a prayer below using the ABC's of Bible Prayer and claiming the promise found in Philippians 4:19.

The Ultimate Evidence - Lesson 8



1. Focus on the physical:

The crucifixion of Jesus has been written about by tens of thousands of writers. The gruesome reality of this type of death has been depicted on both stage and screen, most recently during Mel Gibson's "The Passion of Christ." It has been the central theme of sermons for over 2000 years.

But when it comes to the cross, why do we as Christians focus so much upon the physical death of Christ? Why the focus on the pain and suffering Jesus endured?

2. Why the cross? Read Philippians 2:8

Notes:

History tells us that the cross was invented about 600 years before Christ by the Phoenicians. The Egyptians and then the Romans both adopted it as their form of capital punishment. The suffering usually lasted between 3 and 7 days.

3. We have a law? Read John 19:5-7

Notes:

4. Crucified or stoned? Read Leviticus 24:16

Notes:

If a judge would condemn a person to death, that person could go back to his prison cell and offer up a prayer of forgiveness to God, asking that his sins be forgiven. But if the judge not only sentenced him to death, but to also hang his body on a tree, there was no hope for that man. He had passed the point of forgiveness. He was "forsaken" by both man and God. He was abandoned to suffer the forever death.





5. What death? Read Hebrews 2:9

If Jesus suffered the death of every man, this cannot be the first death, because we all suffer the first death. There has to be a second death. One that would have eternal consequences. One that we would never wake up from. The consequences of that death would be eternal.

Notes:

6. Forsaken forever. Read Matthew 27:46

In yielding up His life, Christ was not upheld by triumphant joy. All was oppressive gloom. It was not the dread of death that weighed upon Him. It was not the pain and humiliation of the cross that caused His agony. Christ was the prince of sufferers; but His suffering was from a sense of the malignity of sin, a knowledge that through familiarity with evil, man had become blinded to its enormity. Christ saw how deep is the hold of sin upon the human heart, how few would be willing to break from its power. He knew that without help from God, humanity must perish, and He saw multitudes perishing within reach of abundant help.

Notes:

7. The ultimate evidence. Read Romans 8:32

God has provided us with the ultimate evidence to prove that all of His promises are sure. A death that was not required by God to change His attitude toward us, but a death that was required by mankind to prove that God would go to any length needed, to give us the evidence of His love for us. Even to the length of dying forever that we may live.

Christ felt the anguish which the sinner will feel when mercy shall no longer plead for the guilty race. It was the sense of sin, bringing the Father's wrath upon Him as man's substitute that made the cup He drank so bitter, and broke the heart of the Son of God.



Notes:

8. Homework assignment:

List below 8 things you have learned about God in the past 8 weeks.

The Vegan Food Pyramid



8-10 Glasses a day. If you are active, drink more!



WEEK 1 RECIPES

CROCK POT MILLET *(Makes 10 cups)*

1-1/2 cups	Dry Millet
1 cup	Chopped Dates
1 tsp.	Real Salt
8 cups	Water
2 Tbl	Maple Syrup or 1 tsp Maple Extract or both
1 tsp	Vanilla
1/2 cup	Raisins, chopped apricots, or Craisins
2 tsp	Cinnamon or Coriander

(Variation: Add 1/2 c up each chopped walnuts and apples and dash of nutmeg.

Blend together:

2/3 cup	Almonds
1 cup	Water

Add mixture in pot and cook on low overnight. Stir before serving.

OVERNIGHT APPLE OATS

(Makes 12 cups)

4 cups	Rolled Oats
7 cups	Water
2 cups	Apple juice
2 cups	Apples, diced
1 tsp	Vanilla
1 cup	Nuts, chopped

Place all ingredients except for vanilla and nuts in a slow cooker. Cook on high for 3-4 hours or on low 7-9 hours. For best results do not remove cover during cooking process.

When cereal is done, stir in vanilla and nuts. May be necessary to stir a little bit to thicken cereal.

PINEAPPLE BREAKFAST BARS

1 20oz can	Pineapple Chunks (In pineapple juice)
1/2 cup	Almonds
1/4 cup	Raisins
2 Tbl	Oil
1/2 tsp	Salt
1/2 tsp	Vanilla (no alcohol)
1-1/2 cup	Quick Cooking Oats
1/2 cup	Coconut, unsweetened
1/2 cup	Whole Wheat Flour

Thoroughly drain juice from pineapple and set aside.

Place pineapple chunks in blender and blend until smooth. Scrape blender into a small dish. Set aside.

In blender, place almonds, 1/2 cup of reserved pineapple juice, raisins, oil, salt and vanilla. Blend until smooth. May need to occasionally turn off blender and scrape sides.

In a mixing bowl combine oats, coconut and flour. Pour blended almond mixture over dry ingredients and mix with hands or fork.

Press half of mixture into bottom of an 8" x 8" well-oiled baking dish. Bake at 350 degrees for 10 minutes.

Remove from oven and spread pineapple puree over top of crust. Crumble remaining oat mixture over top of pineapple. Bake for an additional 20 to 30 minutes at 350 degrees or until lightly browned.

Remove from oven and allow to cool before cutting into bars.

CREAMY RICE CEREAL *(Makes 6 cups)*

1 cup	Coconut milk or soy milk
1	Banana
1/2 cup	Raisins
1 20 oz can	Crushed pineapple
1 cup	Pineapple juice (from can pineapple)
1/2 tsp	Coconut extract
4 cups	Cooked Rice

Blend together the coconut or soy milk, banana, juice, and coconut extract.

Place rice in a casserole dish that has been lightly coated with oil. Fold in crushed pineapple and raisins. Stir in blended milk and juice.

Bake at 350 degrees about 20 minutes.

MAPLE NUT GRANOLA

Put in Blender:

1 cup	Water
1/2 cup	Honey
1 Tbl	Molasses
1 Tbl	Vanilla
1-1/2 tsp	Maple Flavoring
1 tsp	Salt
2 cups	Dates, pieces or diced
1 cup	Nuts (walnuts, Brazil, peanuts or almonds)

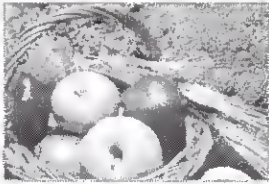
Blend for about 1 minute until smooth

Mix in large bowl

13 cups	Oatmeal (Regular)
1 cup	Coconut
2 cups	Nuts (walnuts, Brazil, peanuts or almonds Coarsely chopped)

Add blended mixture to the oatmeal mixture and gently mix with hands. If mixture is too sticky and clings to your hands, add a little Quick Oatmeal. If mixture is too wet it will not be tender.

Place mixture onto two large sheet pans that have sides, taking care not to pack or pat it down tightly. Place pans in oven at 175 degrees for about 8 hours ^ no need to stir if it is baked slowly.



WEEK 2 RECIPES

CHILI WITH CORN *(Makes 6 cups)*

1/2 cup	Onion, diced
1/2	Pepper, green or red
1-2 cloves	Garlic, crushed (or 1/2 tsp.
	Garlic powder
1 tsp	Cumin
1-1/2 tsp	Chili Powder
2 tsp	Onion Powder
1/2 tsp	Salt
2 cups	Black Beans (may be canned)
1-1/2 cup	Corn, frozen or fresh
14 oz	Diced Tomatoes in juice
2 Tbl	Molasses

Put onion, peppers and seasonings in kettle and add about 1/2 cup water. Simmer until onion is tender.

Add remaining ingredients and heat to serving temperature.

CHIX-STYLE NOODLE SOUP

(Makes 10 cups)

8 cups	Water
1 large	Onion, diced
2 large	Carrots, sliced thin
2 stalks	Celery, chunked
1 Tbl.	Parsley flakes
4 Tbl	Chicken-like Seasoning
1-1/2 tsp	Salt
1 tsp	Vegetable oil or margarine

Place all ingredients into 5 quart kettle and bring to a boil. Boil 5 minutes.

Add:

4 oz	Soy Curls
1 pkg	Whole Grain Noodles

Bring back to a boil. Turn heat down. Continue to cook until noodles are tender.

LENTIL STEW *(Makes 15 cups)*

Cook:

8 med	Potatoes, cubed
6 sliced	Carrots

Set aside

Combine in a large saucepan and cook about 45 minutes.

8 cups	Water
2-1/2 cups	Lentils (brown or green)
1 medium	Onion, chopped fine
1 clove	Garlic, chopped fine
1	Bay leaf

Remove bay leaf.

Add:

1-1/4 tsp	Garlic Salt
1 tsp	Onion Salt
1/2 tsp	Salt
1 Tbl	Bragg Liquid Aminos

Combine seasoned lentil and vegetable mixture.



WHOLE WHEAT BREAD

(Makes 1 large loaf)

1-1/2 cups	Warm Water
2 Tbl.	Applesauce
2 Tbl.	Honey
1 tsp	Salt
2 tsp	Active Dry Yeast
3 cups	Whole Wheat Bread Flour
1 Tbl.	Gluten Flour
1 Tbl.	Dough Conditioner (optional)

** Dough conditioner - 1 or 2 crushed vitamin C tablets.

BREAD MACHINE:

Place all ingredients in container according to manufacturer's directions.

STAND MIXER WITH DOUGH HOOK OR BY HAND:

Place in mixer bowl: Warm water, applesauce, honey and yeast.

Add:

Whole Wheat flour, gluten flour, dough conditioner and salt. Mix until dough comes to a ball and cleans the sides of the bowl.

Make into loaf and put in oiled loaf pan. Bake 350 degrees for approximately 30 minutes.

LIGHT CARAWAY RYE BREAD

Makes 1 1/2 pound loaf

1 cup	Warm Water
1-1/2 Tbl	Olive Oil
1/3 cup	Flax Seed Gel or
	1/3 cup Apple Sauce
1 1/2 tsp	Sucanat or Date Sugar
2 cups	Bread Flour
3 Tbl	Gluten Flour
1 Tbl	Caraway Seeds
1 tsp	Salt
1 1/2	tsp Dry Yeast

GREEN SPINACH BREAD

(For Bread Baking Machine)

1/4 cup	Water (more water may be added if needed)
2 Tbl	Olive Oil
1/4 tsp	Sucanat or Date Sugar
1 1/4 tsp	Salt
1/3 cup	Flax Seed Gel or
	1/3 cup Apple Sauce
1 pkg 10 oz	Frozen Spinach Defrosted w/Liquid
1 Tbl	Caraway Seeds
1 Tbl	Gluten Flour
2 2/3 cups	Bread Flour
1/2 cup	Rye Flour
1/4 tsp	Ginger
2 1/4 tsp	Yeast

Mix in order given.



WEEK 3 RECIPES

HOLIDAY NUT LOAF *(Makes 8-10 slices)*

1 cup	Tofu and 1/2 cup water
3 cloves	Garlic, minced (or 1 tsp garlic powder)
1 Tbl.	Bragg's Aminos (or 2 tsp soy sauce)
1/4 cup	Gluten Flour or cornstarch
1-1/2 tsp.	Salt
1 Tbl.	Onion Powder
1 tsp.	Sage or Italian Seasoning
3-4 cups	Soft, whole grain bread crumbs
2 cups	Pecan Meal or Finely Ground Walnuts,
2 cups	Finely chopped onions

Blend tofu with water, garlic and seasonings.

Combine remaining ingredients in a mixing bowl.
Add blended tofu and mix well.

Place mix in lightly oiled or non-stick loaf pan.

Cover with foil and bake at 350 degrees for 1 hour. Remove foil and bake uncovered for 30 minutes.

Remove from oven and let cool for about 5 minutes to give it a chance to set up before removing from the pan.

SCALLOPED POTATOES *(Makes 6 cups)*

6 cups	Sliced Potatoes
1 med.	Onion, sliced in rings
1 can	Coconut Milk (This is not "cream of coconut")
1/2 Tbl	Onion Powder
1/2 tsp	Garlic Powder
1 tsp	Salt

Boil potatoes and onions in 6 cups water with 1 tsp salt for 5 minutes. Drain and place in an 8" oiled casserole dish.

Combine milk with seasonings and pour over potatoes, pressing them firmly into the milk, Sprinkle with paprika if desired.

Bake uncovered at 400 degrees for 45 minutes.

TAPIOCA PUDDING *(Makes 2-1/2 cups)*

1-1/2 cups	Coconut Milk
1/2 cup	Soy or Nut milk
1/4 tsp	Salt
1/4 cup	Honey
1/4 cup	Minute Tapioca

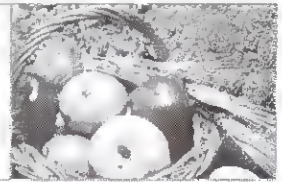
Cook in saucepan over medium heat, stirring constantly until mixture comes to a full boil.

Remove from heat. When mixture has cooled, stir in:

1 tsp	Vanilla (no alcohol)
-------	----------------------

May be topped with fruit and whipped cream.

WEEK 4 RECIPES



STOVE TOP OATMEAL

(makes 10 cups)

5 cups Oatmeal
12 cups Water
Pinch of salt

Bring water to a boil and add oatmeal.
Simmer 20-25 minutes

OVERNIGHT OATMEAL

(makes 10 cups)

5 cups Rolled Oats
15 cups Water

Place oats and water in a slow cooker. Cook on high for 3-4 hours or on low for 7-9 hours.

(For best results do not lift lid during cooking)

When cereal is done, remove lid and stir well to thicken.

APPLE TOPPING (makes 6 cups)

4 cups Diced apples
12 oz Apple or White Grape frozen concentrate
1 cup Water
3 Tbl. Potato Starch or 1/4 cup Clear Jel dissolved in 1/2 cup water. (1/3 cup cornstarch may be used instead.)

Place fruit, juice and water in a saucepan. Place over high heat until mixture begins to boil.

Remove from heat and stir in dissolved starch. Return to heat and stir until it just begins to boil and becomes thick.

WHIPPED TOPPING

1 cup Water
2 tsp Agar powder
1/2 cup Cashews
1/3 cup Honey or (1/2 cup sugar)
1/2 tsp Salt
1 tsp Vanilla
1/2 tsp Coconut extract
1 can Coconut milk

Stir together water and agar powder. Bring to a boil, stirring constantly. Reduce heat and simmer for 1-2 minutes. Place remaining ingredients in blender along with hot agar mixture. Blend on high until smooth, adding water as needed to make 3-1/2 to 4 cups total. Pour into container and refrigerate. Before using, place mixture into blender and blend until creamy. It should be the consistency of Cool Whip but not having the air. (Try not to add more liquid. The mixture will eventually go through the blades and become creamy if you carefully push it towards the blades with a rubber spatula.)

GRANOLA BARS

Place in 2 quart kettle and simmer for 10 minutes:

1 cup	Brown Rice Syrup
1/3 cup	Honey
2 tsp	Vanilla
1 tsp	Coconut Extract

Combine in large bowl:

3 Tbl	Peanut Butter (natural)
4 cups	Granola
4 cups	Puffed Rice or Rice Krispies
1/2 cup	Sesame Seeds
1/2 cup	Pumpkin Seeds
1/2 cup	Sunflower Seeds
1/2 cup	Unsweetened Coconut
1 cup	Dry Roasted Peanuts (unsalted)
1-1/2 cup	Raisins, dried cranberries or cherries.

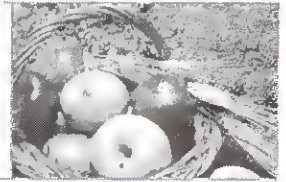
Add hot syrup and mix to coat evenly

Spread onto a lined or oiled 12" X 17" sheet pan that has sides. Press lightly with wet hands. Bake 350 10-15 minutes or until lightly browned.

Remove and cool for 20 minutes. With oiled knife cut into squares while still slightly soft.

Store in plastic bags when cool.

WEEK 5 RECIPES



HONEY PEANUT BUTTER BARS

(9" X 13" pan - 20 servings)

- 1 cup Honey
- 1-1/2 cup Peanut Butter (natural without sweetener or hydrogenated oils)
- 2 tsp Vanilla (non alcohol)
- 6 cups Crispy Rice Cereal

Place honey and peanut butter in a large saucepan and bring to a boil over medium heat, stirring often.

Remove from the heat; quickly stir in vanilla and crispy rice cereal.

Press mixture into a lightly oiled 9" x 13" baking dish.

Chill until firm. Cut into small squares

BAKED ENCHILADA CASSEROLE

(5-6 servings)

- 1 16 oz Pinto Beans, drained
- 1 16 oz Chili Beans, not drained
- 1 cup Bulgur burger, browned
- 1 large Onion, chopped
- 1/2-1 cup Thick & Chunky Salsa
- 12 Corn tortillas, cut in 1" squares
- 1-2 cups Un-Cheezie Cheese Sauce

Mix beans, onion, salsa and Burger, mix well. Spray 8 X 11 inch pan with 2" sides. Sprinkle 1 Tbl water on bottom of pan. Layer pan with half the tortilla pieces, half the bean mix, and half the cheese. Repeat layers.

Bake at 350 degrees for 45 minutes. Serve with chopped tomatoes, lettuce, guacamole and sour cream of choice.

7-LAYER STEW CASSEROLE

(5-6 servings)

Layer in casserole dish:

- 4 med Potatoes, sliced
- 1/4 cup Brown rice (cooked)
- 1 Sliced onion
- 1 tsp Salt
- 1-1/2 cups Frozen carrots & peas or mixed vegetables.
- 2 cups Burger (browned w/onion)

Mix:

- 1 29 oz Tomato sauce mixed with
- 3/4 cup Soy milk
- 1 cup Water
- 2 Tbl Honey

Pour over layers in pan and bake at 400 degrees for one hour.

UNCHEEZIE SAUCE (2-1/2 cups)

Place in blender:

- 1 cup Cashews
- 3/4 cup Water

Blend until it is not grainy, about 2 minutes. Be sure to wash your cashews.

Add:

- 2 Tbl Sesame seeds or 1 Tbl Tahini
- 4 Tbl (heaping) Nutritional Yeast Flakes
- 1 tsp Onion powder
- 1 tsp Garlic powder
- 1/4 cup Lemon juice
- 1-1/2 tsp Salt
- 1/8 tsp Celery seed (optional)
- 1/4 cup Pimentos (or more)
- 1/4 cup Olive oil

Blend for one minute. Refrigerate. If this gets too thick as it sits, add more water



WEEK 6 RECIPES

PIZZA CRUST *(makes 2 crusts)*

1 1/2 cups Warm Water
2 Tbl. Applesauce
2 Tbl. Honey
1 tsp Salt
2 tsp Active Dry Yeast
3 cups Whole Wheat Bread Flour
1 Tbl. Gluten Flour
1 Tbl. Dough Conditioner (optional)

For dough conditioner, you may crush up a vitamin 3 tablet until it is fine and put it in with the flour. Place in mixer bowl: Warm water, applesauce, honey and yeast.

Add:
Whole Wheat flour, gluten flour, dough conditioner and salt. Mix until dough comes to a ball and cleans the sides of the bowl.

Divide dough in 2 balls. Spread each ball on oiled pizza pan or cookie sheet. Prick with a fork. Let set 5 minutes. Bake 400 degrees 15 minutes.

BURGUR/CHEEZE DIP

2 cups Bulgur Burger
1 can Mild chili Beans
1 cup Diced Onion
1 cup Salsa
Chili powder or taco seasoning to taste.

Mix in saucepan and cook on low until onion is soft. Cool thoroughly.

Mix with equal amounts of Traci's cheese sauce.

Serve warm or room temperature.

SIMPLE PIZZA SAUCE

(makes 2 cups - 1 pizza)

1 - 29 oz can Crushed Tomatoes
1/4 tsp Dried Oregano
1/4 tsp Garlic Powder
1/8 tsp Salt

Stir all ingredients together. Put on pizza crust.

UNCHEEZIE SAUCE (2-1/2 cups)

Place in blender:

1 cup Cashews
3/4 cup Water

Blend until it is not grainy, about 2 minutes. Be sure to wash your cashews.

Add:

2 Tbl Sesame seeds or 1 Tbl Tahini
4 Tbl (heaping) Nutritional Yeast Flakes
1 tsp Onion powder
1 tsp Garlic powder
1/4 cup Lemon juice
1-1/2 tsp Salt
1/8 tsp Celery seed (optional)
1/4 cup Pimentos (or more)
1/4 cup Olive oil

Blend for one minute. Refrigerate. If this gets too thick as it sits, add more water

FIBER BARS *(makes 1 batch)*

1-1/2 cup	Dry Roasted Peanuts
3/4 cup	Sunflower Seeds
3/4 cup	Walnuts
1/3 cup	Carob Powder (optional)
1-1/2 cup	Granola (or 1/2 cup Grape Nuts)
1-1/2 cup	Flaxseed Meal
3 cups	Rice Krispies
3/4 tsp	Salt
3/4 cup	Honey
1 Tbl	Vanilla
1/3 cup	Water

Place peanuts, sunflower seeds, walnuts and carob powder in a food processor and mix with steel blade for 1 minute, or until a fine powder. Add granola (or Grape-Nuts) and blend briefly to make a coarse meal.

Place nut mixture in a mixing bowl and stir in flaxseed meal and Rice Krispies. Add honey, vanilla and water. Mix well with hands.

Press into a 9 X 13 baking pan that has been lightly oiled. Score/cut into 24 squares. Bake 15 minutes at 350 degrees.

BULGUR BURGER *(makes 1 cups)*

1 cup	Bulgur Wheat
1 1/2 cups	Water
1/2 cup	Ground Walnuts or Pecan meal
1 Tbl	Dried Onion Flakes
1 clove	Garlic (or 1/2 tsp garlic powder)
1 Tbl	Nutritional Yeast Flakes
1/2 tsp	Salt
1 Tbl.	Bragg' Liquid Aminos
1 Tbl	Beef-like Seasoning
1 8 oz	Tomato Sauce

Mix all ingredients together in a saucepan and bring to a boil. Reduce heat, cover, and simmer until thick. Remove from heat and let sit covered for 10 minutes.

Use as is, or place in a skillet over medium-high heat and brown, stirring now and then. If desired add about 1 cup diced onion.

*This can be made in large batches and frozen. I put it in 1 quart zip bags and stack in freezer so they are ready to use when I need them

CRACKER BARREL CHEDDAR UNCHEEZE

Place all ingredients in blender:

1/2 cup	Sesame Tahini
1/4 cup	Lemon juice
4 Tbl	Nutritional Yeast Flakes
1/2 cup	Pimento
1-1/2 tsp	Salt
1 tsp	Onion Powder
1/2 tsp	Garlic Powder
2 Tbl	Agar powder, dissolved in
1/2 cup	cold water.
1/2 cup	Boiling water

Blend thoroughly until mixture is smooth and creamy.

Pour into a sprayed mold and refrigerate.
When thoroughly chilled and set turn out into a dish.

Slices and melts well.

CREAM CHEESE SPREAD

1 can	Coconut milk
1 cup	Raw cashews
1 Tbl	Yeast Flakes
1 Tbl	Lemon juice
1 tsp	Honey or 1/2 Tbl sugar
1-1/2 tsp	Salt

Place in blender and blend for 1 min until smooth.

Bring to a boil on stove, stirring constantly.

Chill

Fruit Flavored: Add 1/2 cup jam

French Onion: Add 1 Tbl dried onion flakes, 1 tsp onion powder, 1/4 tsp garlic powder, 1 tsp beef-like seasoning.

Dill & Chives: 1/4 tsp dill weed, 2 tsp chives, 1 tsp onion powder, 1/8 tsp garlic powder.

MOCKZARELLA CHEEZE

(You can slice)

1-1/2 cups	Cashews
1-1/2 cups	Water

Blend until creamy and smooth

Add:

1/4 cup	Onion flakes
1 tsp	Salt
1 tsp	Onion Salt
1/4 tsp	Garlic Salt

Blend.

Dissolve in saucepan:

1/2 cup	Water
1/3 cup	Agar powder.

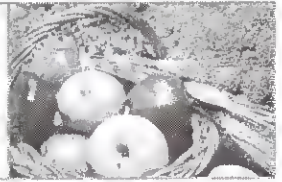
This will be thick but will dissolve when heated slowly. Stir constantly until it almost comes to a boil and becomes clear.

Add to blender mixture. Blend quickly.

Pour into oiled, oblong container with lid. Cover and refrigerate. It takes several hours to set.

This can be frozen and thawed for use.

WEEK 7 RECIPES



NEATBALLS

(2 dozen or more, depending on the size)

Place in large mixing bowl:

2 cups	Soft W.W. bread crumbs
1/4 cup	Finely chopped walnuts
1/2 cup	Quick Oats
1/2 cup	Finely diced onions (or 1/4 cup diced onion flakes.
1/2 tsp	Garlic powder
1 tsp	Onion powder
1/2 tsp	Vege-Sal or Salt
1 tsp	Italian seasoning
2 tsp	Chicken-like seasoning

Blend in blender:

16 oz brick	Tofu
1/2 cup	Water
2 Tbl	Bragg liquid aminos

Add to the bread crumb mixture in the bowl and mix well. This will be wet.

Use small scoop and put mounds on a nonstick or oiled cookie sheet. If desired, flatten balls into small patties.

Bake at 350 degrees for 30 minutes or until golden brown on top and bottom.

FRUIT SALAD DRESSING:

1/4 cup	Nayonnaise
1 cup	Whipped Topping

This can be adjusted according to the amount of fruit that you have in the salad and the sweetness of the fruit. This is for 6-8 cups of ripe fruit.

SWEET AND SOUR TOMATO SAUCE

2 cups	Pineapple juice
2 14 oz can	Diced or stewed tomatoes
1 6oz	Tomato paste
1-2 Tbl	Honey
1	Onion, chopped
1	Green pepper chopped
3 cloves	Garlic, minced
1 tsp	Basil
1+ tsp	Salt (or to taste)
1 Tbl	Onion powder
3 Tbl	Cornstarch

Place all ingredients in blender and blend for a few seconds – just enough to chop the onion and pepper, but not puree.

Pour into a saucepan and bring to a boil; reduce heat and simmer for about 10 minutes.

*We have found it best to not put the neatballs in the sauce as they tend to get mushy.

FRUIT SALAD

Any combination of fruit:

Bananas, oranges, (fruits canned in fruit juice), strawberries, raspberries, blueberries, nuts, unsweetened coconut, apples, raisins, dates, pears, peaches, pineapple

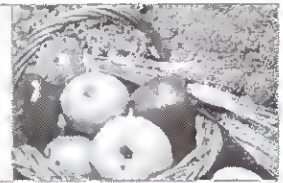
NO CRUST PUMPKIN PIE:

1-1/2	Soy Milk
1 Tbl	Ener-G-Egg Replacer
1/4 cup	Water
1 Tbl	Cornstarch
1 tsp	Vanilla
2 cups	Pumpkin, mashed
1/2 cup	Rice Flour
2 tsp	Baking Powder
1 tsp	Cinnamon or Cardomom
1/2 tsp	Nutmeg
1/4 tsp	Ground Cloves
1/2 tsp	Salt

- Put first five ingredients in the blender and blend well.
- Add pumpkin and puree a few seconds.
- Add remaining ingredients and blend on high for 2 minutes, stopping to scrape the sides a couple of times to make sure everything is thoroughly blended.
- Pour into a 9" deep dish pie pan and bake 350 degrees for about 60 minutes. The top and edges should be browned.
- Remove from oven and allow to cool on the counter. For best results, refrigerate until chilled before eating.

1/6 piece of pie = 3 grams of fiber. This will have a crust, but it will be thin. You can pick up a piece of pie without it falling apart.

WEEK 8 RECIPES



CUBAN BLACK BEANS *(8 cups)*

2-1/2 cups Dry Black Beans
 5 cups Water
 1/2 cup Diced Green/Red Pepper
 1 med. Chopped Onion
 2 tsp Chicken-Like Seasoning
 1 tsp Onion Powder
 1 tsp Garlic Powder
 1/2 tsp Sweet Basil
 2 Tbl. Bragg' Liquid Aminos or soy sauce
 1 Tbl Lemon Juice
 1-1/2 tsp Vege-Sal or 1/4 tsp Salt

Sort black beans and soak in 10 cups of water overnight – or bring to a boil, turn off heat and let sit one hour. Drain off water and put fresh water on them.

Add remaining ingredients and bring to a boil, then simmer on low heat for about 1-1/2 hours or until tender.

FLUFFY BROWN RICE *(3 cups)*

2 cups Water
 1 cup Rice
 1 tsp Salt

Bring water to boil
 Add salt and rice
 Cover and cook on low for approx. 40 minutes
 When done cooking, remove lid and fluff rice with a fork.

UNCHEEZIE SAUCE *(3 cups)*

Place in blender:

1 cup Cashews
 2 Tbl Sesame seeds or 1 Tbl Tahini
 4 Tbl (heaping) Yeast Flakes (or more)
 1 tsp Onion powder
 1 tsp Garlic powder
 1/4 cup Lemon juice
 1-1/2 tsp Salt
 1/8 tsp Celery seed (optional)
 1/4 cup Pimentos (or more)
 1/4 cup Olive oil
 3/4 cup Water

Blend for 2 minutes. Refrigerate. If this gets too thick as it sits, add more water.

TOFU SOUR CREAM

1/2 cup Raw cashews, washed
 1/2 cup Water
 3/4 tsp Salt
 1/2 tsp Onion Salt
 1/4 tsp Onion Powder
 1/4 tsp Garlic Powder
 1/2 tsp Garlic Salt

Blend til creamy.

Add:

1 12.3 oz Mori-Nu firm tofu
 2-1/2 Tbl Fresh lemon juice.

Blend til creamy. Refrigerate.

** May have to add more lemon juice.

ALMOND JEWELS *(1 batch=20 cookies)*

1 cup	Whole Wheat Pastry Flour
2 Tbl	Cornstarch
1 tsp	Salt
2/3 cup	Brown Sugar
1/2 tsp	Baking Soda
2 cups	Raw Almonds
1/2 cup	Applesauce
1/4 cup	Water
2 tsp	Vanilla
1/3 cup	Sugarless Fruit Jam

Place flour, cornstarch, salt, brown sugar, baking soda and 1 cup of the almonds in a food processor and blend for 1 minute, or until nuts are as fine as the flour. Add remaining cup of almonds and blend for about 10 seconds.

Remove to a mixing bowl and stir in the remaining ingredients except for the fruit jam.

Spoon onto a cookie sheet (or use a small ice-cream scoop) Make a thumb indentation in the center of each cookie and fill each depression with fruit jam. Bake at 350 degrees for about 15 minutes. Remove when the bottoms are just beginning to brown. Cool on rack.

CUCUMBER DRESSING

2 small	Cucumbers (put in food processor)
1-1/2 cups	Vegginaise
1/2 tsp	Dry ranch dressing seasoning
1/2-1 tsp	Lemon-Dill Zest (Veg Express) or Dill & lemon juice to taste.

Thin with a little milk if too thick.

Makes 2 cups

RANCH STYLE DRESSING

DRESSING MIX:

1/4 cup	Onion powder
2 tsp	Garlic powder
1 Tbl	Celery salt or Veg-E-Sal
2 Tbl	Dried Parsley Flakes
1 Tbl	Poppy seeds
1 Tbl	Dill weed
2 tsp	Sweet Basil
1-1/2	tsp Salt
1 Tbl	Sugar

Mix together and store in air-tight container (1 cup).

TO MAKE DRESSING:

1/2 cup	Vegginaise
1/2 cup	Sour Cream
1 Tbl	Lemon juice
1/4 cup	Milk
1 round Tbl	Dressing Mix (above)

Mix well.

****OR BUY "VEGETARIAN EXPRESS SAUCE RANCH MIX" AND MIX ACCORDING TO RECIPE ON JAR. EXCELLENT!!**

KETCHUP

Place in food processor:

2 cups	Crushed or fresh diced tomatoes
1/4 cup	Tomato paste
1/2 cup	Red bell pepper
1/4 cup	Onion, chopped
2 Tbl	OJ concentrate
1/2 tsp	Celery seed
2	Carrots, cut in chunks
4-6 Tbl	Lemon juice, to taste

Process until smooth and well blended. (May eat as is or proceed to next step) Transfer mixture to saucepan, add bay leaf and simmer uncovered over medium low heat stirring constantly to desired consistency. Add more O.J. or lemon juice to taste. If you prefer sweeter taste add honey or sugar, cloves and cinnamon.

The Bible and Good Health

What is God's wish for everyone?

"Beloved, I wish above all things that thou mayest prosper and be in health."

3 John 2

What has God promised to do for His people if they will obey Him?

"And ye shall serve the Lord your God, and He shall bless thy bread, and thy water; and I will take sickness away from the midst of thee."

Exodus 23:25

As our creator, what does God claim as His property?

"What? Know ye not that your body is the temple of the Holy Ghost which is in you, which ye have of God, and ye are not your own? For ye are bought with a price; therefore glorify God in your body, and in your spirit, which are God's."

1 Corinthians 6:19, 20

What warning has God issued regarding the care of the body?

"Know ye not that ye are the temple of God, and that the Spirit of God dwelleth in you? If any man defile the temple of God him shall God destroy: for the temple of God is holy, which temple ye are."

1 Corinthians 3:16, 17

Note: The Christian should avoid any and all harmful substances. Tobacco contains nicotine, a deadly poison. Recent scientific findings establish the fact that the use of tobacco often shortens the life span by as much as one-third. This violates God's commandment against killing (Exodus 20:13).

Most people are aware of the harmful effects of tobacco, but what about debilitating beverages? "Tests clearly showed that the pharmacological effects of coffee were due to its caffeine content . . . It is reasonable to classify the coffee-drinking, or caffeine habit with the other drug habits—opiates, alcohol, barbiturates, and nicotine . . . The popular cola drinks get their appeal from their caffeine content; should not "cola" addiction be classed with drug addiction? There are tea addicts, too."

New England Medical Journal, May 13, 1954

What is man's reasonable service toward God?

"I beseech you therefore, brethren, by the mercies of God, that ye present your bodies a living sacrifice, holy, acceptable unto God, which is your reasonable service."

Romans 12:1

Note: God wants us to be healthy. In the Bible we find His guidelines for health and happiness. God will not force us to follow His manual, but failure to follow it will result in poor health. His promise is, "If thou wilt diligently harken to the voice of the Lord thy God, and wilt do that which is right in his

sight, and wilt give ear to his commandments, and keep all his statutes, I will put none of these diseases upon thee, which I have brought upon the Egyptians: for I am the Lord that healeth thee.”

Exodus 15:26

Does the Bible advise against the use of alcoholic beverages?

- a. “Wine is a mocker, strong drink is raging: and whosoever is deceived thereby is not wise.”
Proverbs 20:1
- b. “Look not thou upon the wine when it is red, when it giveth his color in the cup, when it moveth itself aright. At the last it biteth like a serpent, and stingeth like an adder.”
Proverbs 23:31, 32
- c. “Nor thieves . . . nor drunkards . . . shall inherit the kingdom of God.”
1 Corinthians 6:10

What was God’s original plan for man’s diet?

“Behold, I have given you every plant yielding seed that is on the surface of all the earth, and every tree which has fruit yielding seed; it shall be food for you.”
Genesis 1:29 (NASV)

Note: God’s original diet for man included grains, nuts, and fruits. Herbs (vegetables) were added after man had become fallen with sin (Genesis 3:18) and flesh food was not included in man’s diet until after the flood (Genesis 9:1-3). When flesh foods became part of man’s diet, his life span was greatly shortened!

What distinction or division did God make between the animals when He sent them into Noah’s ark?

“Of every clean beast thou shalt take to thee by sevens, the male and his female; and of beasts that are not clean by two, the male and his female.”

Genesis 7:2

What is God’s definition of a “clean” animal?

“And the Lord spake unto Moses and to Aaron, saying unto them, Speak unto the children of Israel, saying, These are the beasts which ye shall eat among all the beasts that are on the earth. Whatsoever parteth the hoof, and is clovenfooted, and cheweth the cud, among the beasts, that shall ye eat.”
Leviticus 11:1-3

What are some of the animals God lists as “unclean” and unfit for food?

“However, of those that chew the cud or that have a split hoof completely divided you may not eat the camel, the rabbit or the coney. Although they chew the cud, they do not have a split hoof; they are ceremonially unclean for you. The pig is also unclean; although it has a split hoof, it does not chew the cud. You are not to eat their meat or touch their carcasses.”

Deuteronomy 14:7,8

Note: In other words, animals of the field must pass these two tests. Evidently there is something unwholesome about animals that do not pass these tests or God would not withhold them from us, for “no good

thing will he withhold from them that walk uprightly.” Psalm 84:11

What about seafood and fish?

“These shall ye eat of all that are in the waters: whatsoever hath fins and scales in the waters, in the seas, and in the rivers, them shall ye eat. And all that have not fins and scales in the seas, and in the rivers, of all that move in the waters, and of any living thing which is in the waters, they shall be an abomination unto you.”

Leviticus 11:9,10

Are there “clean” and “unclean” fowl?

“You may eat any clean bird. But these you may not eat: the eagle, the vulture, the black vulture, the red kite, the black kite, any kind of falcon, any kind of raven, the horned owl, the screech owl, the gull, any kind of hawk, the little owl, the great owl, the white owl, the desert owl, the osprey, the cormorant, the stork, any kind of heron, the hoopoe and the bat.”

Deuteronomy 14:11-18

Years after Peter became a Christian, he received a vision from God. In his vision, he saw a great sheet descend from heaven filled with unclean animals and heard a voice saying to him, “Rise, Peter; kill, and eat.” What did Peter reveal about his diet?

“I have never eaten anything that is common or unclean.”

Acts 10:14

Note: Peter did NOT change his diet when he became a Christian. He observed the dietary laws of the Old Testament.

What was not clear to Peter after he had received this strange vision?

“Peter doubted in himself what this vision which he had seen should mean.”

Acts 10:17

Two days later, what did Peter finally understand was the meaning of his strange vision?

“God has shown me that I should not call any man common or unclean.”

Acts 10:28 (NKJV)

Note: In the eyes of a Jew, a Gentile was an unclean human being, and Jews were taught not to associate with Gentiles. This vision was the means God used to convince Peter that it was now time to take the gospel message to the Gentiles.

Some Christians use Chapter 10 of Acts, especially verse 15, “What God hath cleansed, that call not thou common,” as license for eating unclean animals. However, a careful reading of the vision reveals that God told Peter not to treat any human being as unclean or common. The human stomach, is the same whether Jew or Gentile! God’s dietary laws have never changed.

A Summary of Bible Principles for Good Health

1. Eat at regular intervals and avoid eating between meals. "Eat in due season."
Ecclesiastes 10:17
2. Eat to live and don't live to eat. "Put a knife to thy throat, if thou be a man given to appetite."
Proverbs 23:2
3. Rest according to God's plan. "Six days shalt thou labor, and do all thy work; but the seventh day is the Sabbath of the Lord thy God; in it thou shalt not do any work."
Exodus 20:9,10
- "Come ye yourselves apart . . . and rest awhile."
Mark 6:31
- "It is vain for you to rise up early, to sit up late, to eat the bread of sorrows; for so he giveth his beloved sleep."
Psalm 127:2
4. Keep your body clean. "Let us cleanse ourselves from all filthiness of the flesh."
2 Corinthians 7:1
- "Be ye clean."
Isaiah 52:11
5. Control yourself. "Every man that striveth for the mastery is temperate in all things."
1 Corinthians 9:25
- "Let your moderation be known unto all men."
Phillippians 4:5
6. Put on a happy face. "A merry heart doeth good like a medicine."
Proverbs 17:22
7. Do not use animal fat or animal blood in any form. "It shall be a perpetual statute for your generations throughout all your dwellings that ye eat neither fat nor blood."
Leviticus 3:17
8. Help those who are in need. "Loose the bands of wickedness . . . undo the heavy burdens . . . deal thy bread to the hungry . . . bring the poor that are cast out to thy house . . . When thou seest the naked . . . cover him . . . Then . . . thine health shall spring forth speedily."
Isaiah 58:6-8
9. Trust and obey God. "My son, attend to my words; incline thine ear unto my sayings . . . For they are life unto those that find them, and health to all their flesh."
Proverbs 4:20,22
10. Give God the glory in everything that you do. "Whether therefore ye eat, or drink, or whatsoever ye do, do all to the glory of God."
1 Corinthians 10:31

Questions & Answers

Q *Diabetes runs in my family, so I recently had a blood sugar test done. The result came back at 108. I was told that this result is within the normal range. Does that mean I am safe?*

A Let's use this question to discuss the laboratory test report and gain a greater understanding of its proper interpretation. This will also allow us to develop some principles of health promotion as we move forward. When we look at a typical laboratory test report, we notice the basic fact that the results are considered either normal or abnormal. It is therefore important for us to understand what normal really means. As we learn how these categories are determined, we will begin to realize that a laboratory test result within the normal range is not necessarily the ideal result.

To obtain the reference range (the 'normal' result), scientists take between 1,000 and 10,000 'normal' people and perform the lab test in question. The folks studied are considered 'normal' because they feel well, currently have no obvious diseases, and can walk in and out of the laboratory. These "average" people, then, become the foundation of the normal range.

Can we see a problem

with this method??? Well, for starters, remember that about 50% of those Americans who can walk in, feel well and consider themselves "healthy," will in fact, die prematurely from heart disease, stroke, or other vascular diseases. We also have learned that about one-quarter of "healthy" Americans will in the future be dying prematurely from cancer. The question we want to ask ourselves is do we want to be normal? Do we want the average Americans normal blood cholesterol or triglyceride levels? Do we want their normal glucose (sugar) or normal white blood cell count (WBCs)? Twenty years ago, when I was going through medical school, the

Sample Laboratory Report

Test	Ideal	Average Laboratory Reference Range
Chemistry		
Calcium		8.5 – 10.5 mg/dl
Phosphorus		2.5 – 4.5 mg/dl
Glucose	70 – 85	65 – 110 mg/dl
BUN	7 – 15	10 – 20 mg/dl
Uric Acid	Under 5	2.5 – 8.0 mg/dl
Cholesterol	< 150	150 – 300 mg/dl
Total Protein		6.0 – 8.0 gm/dl
Albumin		3.5 – 5.0 mg/dl
Total Bilirubin		0.15 – 1.0 mg/dl
Alkaline Phos.		30 – 115 mU/ml
LDH		100 – 225 mU/ml
SGOT		7 – 40 mU/ml
Triglycerides	< 100	Up to 200 mg/dl
T4		4.5 – 12.0 ug/dl
CBC		
RBC	Female 3 to 4,000,000 Male 4.2 to 5,000,000	4,200,000 to 5,400,000 4,700,000 to 6,100,000
WBC	3800 – 5500	4,800 to 10,800
Hemoglobin	Female 10.5 – 12.5 Male 12.0 – 14.5	12 to 16 14 to 18
Hematocrit	Female 32 – 38 Male 35 – 43.5	37 – 47 42 – 52

normal range for blood cholesterol was 150 to 300mg%! Should we have felt satisfied if our cholesterol was 295 mg%?

We want to suggest that besides normal and abnormal, there is a third category (or result) that we should consider for some of these tests. We will call this category the *ideal* result. Let's review our sample laboratory report, above, and add this third result, where it is appropriate.

Now for calcium, as for some other substances carried in the blood, the reference range (or the "normal" result) is also the ideal range in the blood. These substances are better assessed other places in the body than the blood stream. For instance, calcium can be found in normal quantities in the blood, although a person has severe osteoporosis (calcium deficiency of the bones). In this case, the individual is really quite calcium deficient; however, this would not be evident from looking at a blood test. Therefore, as we discuss our sample blood test, we will be focusing our discussion on the tests where the ideal blood test results are different from the normal.

For glucose (sugar), the average American's "normal" is not the ideal! Many laboratories will have the range for normal as low as 64 and as high as 118. When people with these levels are thoroughly studied, it becomes obvious that this range is not ideal. For these people are found to have significantly elevated insulin and glucagon levels. These are the hormones that regulate our blood sugar levels; with insulin bringing our blood sugar down and glucagon raising it up. These elevated hormone levels are necessary to keep the glucose level within this 'normal' range.

Indeed our bodies are so adaptable to a faulty lifestyle that the blood sugar can be kept in the "normal" range for years, even decades, simply by raising the production of insulin and glucagon.

This is rightly called **mercy**! For in this situation our body is protecting us from what we deserve. Yet, let us not be deceived, when the glucose levels are repeatedly either above 85 or below 70, we are actually experiencing an early manifestation of the diabetic process. Unheeded, we will suffer the consequences. Heeded as a warning, however, we may make the necessary dietary changes, and thereby avoid diabetes and its serious consequences. This is true preventive medicine!

Interestingly, recent research has forced scientists to ask what is more damaging to our bodies, high blood sugar levels or high insulin levels? If we had asked this question 25 years ago, scientists would have unanimously said it was the high blood sugar. However, today we are learning, it is probably the high insulin levels. Consistently elevated insulin levels are associated with a significant increase in blood cholesterol and triglycerides, obesity (particularly abdominal obesity), and an increased frequency of heart attacks, hypertension, diabetes, and cancer. These problems are part of the Syndrome X condition commonly seen when high insulin levels are present. In some cases, we can even identify children as young as two or three who are likely to develop these conditions, as adults, by their already elevated insulin levels.

Why then do we not check people's insulin levels routinely? Thus far, part of the reason has been because it's extra cost. Yet, more than that is simply the fact that these truths discussed above have not yet permeated into the mainstream of health care. Such testing will probably become commonly available about the time drugs are developed to treat these early phases of disease! Let's not wait for the pill. Instead, let's make a few simple dietary changes now and bring our blood sugar levels back into the ideal range.

Next, we have the BUN (blood urea nitrogen), which is a waste product of protein metabolism (breakdown) removed from the body through the kidneys and in the urine. Ideally, it should be less than fifteen. Even if it is less than six, this is okay, provided we are properly nourished and maintaining our weight. The BUN is a waste product that the kidneys clear from the blood. The level in the blood is simply the amount from current protein metabolism that is awaiting removal by way of the kidneys. High levels are an indication that we have either kidney disease, significant amounts of ongoing tissue damage, are eating too much protein, or are getting too much exercise, among other causes.

Uric acid, like the BUN, is waste product from protein activity and increases with various chronic diseases as well as the items mentioned just above. The ideal level for uric acid is under five, with the more under five the better.

Now we come to the blood cholesterol, which ideally should be about 100 + our age. This level of cholesterol will, in the large majority, prevent the occurrence of a heart

attack. Cholesterol is found in three different molecules, which are called HDL, LDL, and VLDL. HDL is high density lipoprotein; LDL is low density lipoprotein; and VLDL is very low density lipoprotein. Which is the damaging one? LDL is the bad one. Which is the good one? HDL is the good one. Typically the lower the LDL the better and the higher the HDL the better. (Please consider the question on page 180 for more information about cholesterol interpretation). Finally, the ideal level for triglycerides, which are fat globules in our blood stream, is not under 200 but under 100.

Next, we have the T4 level, which is indicative of our thyroid function. As with our pulse (heart rate) and our white blood cell count, it is best when our thyroid level is on the low side. If our thyroid levels are on the high side, then our metabolism will be "revved up" and this will tend to overwork our system and bring on premature aging.

While the "normal" WBC (white blood cell) count range often goes as high as 11,000, ideally it should be between 2800 and 5500. Those who eat natural foods, simply prepared, typically have "cleaner" blood and thus lower levels of white blood cells than do those who subsist on processed foods along with meat and dairy foods. Why? Because as our blood contains increasing amounts of foreign (animal) proteins and chemicals, the body calls on the bone marrow to bring forth more white blood cells to remove them. It is not so much that extra white blood cells are bad for our system but that they are a sign of harmful materials within the body, which are likely causing damage and premature aging. When we are eating according to the

Creator's design, we will have a nice low WBC count.

Next, we consider our hemoglobin, which many labs consider as normal up to 16 grams in women and 18 grams in men. This is far too high! The ideal range is 10.5 to 12.5 for women and 12.0 to 14.5 in men. The higher the hemoglobin goes above the ideal, the greater our risk is for having a stroke, a heart attack, and cancer. Why is that? This is related to the effects these high 'normal' hemoglobin levels have on our immune system and our circulation. Additionally, these high levels are a reaction to other factors like smoking, overeating, or being overweight, which themselves are frequent causes of disease. These high "normal" hemoglobin levels, like the high "normal" white blood cell levels, are a simply a sign of stress or toxicity in the body. In fact, in the case of hemoglobin, doctors call this condition stress polycythemia.

Red blood cells (RBC's) and hematocrit essentially measure the same information as hemoglobin and thus the above discussion also applies to them.

In conclusion, by taking notice (and action) when these levels leave the "ideal" range and enter the "normal" range, we may truly prevent many of the health problems that plague us Americans and shorten our lives. Sadly, by the time these substances first enter into the abnormal category it is likely that damage and disease (often permanent) has been occurring for decades.

Q *Recently, Linda McCartney, a "vegetarian" for much of her adult life, died, losing her battle with breast cancer. Would you please comment?*

A We displayed a chart last week, which revealed the direct correlation between a woman's fat intake and her likelihood of dying from breast cancer. Tonight, we are going to reveal the co-agent of fat in this work of destruction. We are going to see how the lack of this food component leads to the development of cancer including cancer of the breast.

While avoiding animal products is associated with improvement in virtually all areas of health, please recall that this was not the first issue discussed last week. Rather the reduction in animal products was the second of the Twin Errors of the American diet. Yes, eating meat, with its associated high levels of fat and cholesterol is a major problem for us. However, the number one problem with our diet is not really the use of animal products but rather the use of processed, technologically created 'food' products. Why? Because they almost always have the same problems as animal products, that is, high levels of fat and cholesterol. Additionally, they also often contain high levels of salt, sugar and many other chemicals like preservatives and food dyes, which do not exist in the natural diet given to us by our Creator.

The point is that we can completely avoid meat, like Mrs. McCartney reportedly, and still have a poor diet; that is, one that promotes all the diseases common in our society. The question becomes, "Did her 'style' of vegetarianism mean that she avoided meat only, meat and dairy products, or did she understand enough about the relationship between her health and processed foods to also exclude them from her diet?"

As an aside, we should mention that she and her husband reportedly used marijuana regularly for much of their married life. This is a carcinogen (a cancer causing chemical).

Of course, we should also point out the difficulties in drawing conclusions from any one case. Indeed, not everyone who smokes develops lung cancer or emphysema. We are likely all aware of a few souls who miraculously live into their nineties having poor dietary habits. Moreover, the opposite is also true; that is, even the perfect diet does not absolutely guarantee any of us a long and prosperous life.

Having said all of the above, we now come to what is likely the most important factor in this case, as well as our own. (As we continue, let's also recall the ultimate goal of this program.) The fact is our best efforts, apart from the blessings of God, provide for us no guarantees, either in this life or in the life to come. In John 15:5, Jesus reminds us that "without me ye can do nothing."

Let's illustrate what we are saying. The Bible records in Daniel 1 that after ten days of eating pulse and water (a vegetarian diet of the best order), Daniel and his friends appeared fairer and fatter in flesh (healthier) than all the other wise men in the kingdom. As a scientist, I want to suggest that it would be quite unlikely, in a mere ten days, for healthy food alone to change their appearance so dramatically. While it is true, their diet did greatly benefit their health, that it, by itself, caused this result is virtually unbelievable. What then was the cause? It was, in fact, the blessings of God.

By cooperating with the heavenly plan, they allowed God to do for them that which they could not do for themselves.

Herein lies the secret ingredient to the best of health. We should study and discover the lifestyle plan recommended by our Lord and follow it with prayer and thanksgiving. Then, He will bless our efforts and we will experience the effects of the true "bread of life" (John 6:35).

We must never forget that the Lord expects us to be co-workers with Him. Doing for ourselves that which He empowers us to do and then receiving His blessing as He does for us that which we can not (obtain the best health).

Q *Last week you talked about the many health benefits of a rapid transit time through our intestinal tract. Is there any way that I can accurately check my own transit time and thereby know if I am eating enough fiber? What is the ideal transit time?*

A Yes, we can check the transit time required by our digestive system by swallowing 2-3 tablespoons of moistened sesame seeds or by drinking a tablespoon of activated charcoal in water at the end of a meal. Many Americans have a transit time of 60-80 hours. The ideal or healthiest transit time is about 30 hours.

Q *Another way to estimate the digestive transit time, especially for those who are color blind, is by eating hot peppers. Is this okay?*

A That is kind of humorous. Well, we suppose this might be okay if done occasionally, but let's make a comment on

hot spices. The more spices in our diet, the greater our risk for cancer of the esophagus and stomach. With that in mind, what countries do we suppose would have the highest incidence of cancer of the stomach or esophagus?

1. India 2. Mexico 3. Korea

Yep, you guessed it. These countries are the top three in usage of hot spices also! Now, cayenne has many good nutrients, however, it also has capsaicin which is a cancer producing agent. Other spices which can promote cancer include ginger, cinnamon, nutmeg, cloves, black and red pepper.

Q *Some have said that if we have a low cholesterol level, that is less than 100, we have an increased risk of cancer?*

A There is research that reveals this association. Notice, however, that there is a difference between an association and a cause. Cancer cells reproduce more rapidly than normal cells and thereby use more cholesterol. Since they do not stimulate an increased production by the liver, the overall effect is for the cholesterol levels to fall. Therefore, cholesterol levels below 100 can result from cancer, but they are **not the cause** of cancer.

Interestingly however, societies with lowest cholesterol levels have the lowest rates of cancer! So please let's not be unnecessarily concerned if our cholesterol levels drop very low with STARTNEW.

Q *What happens in the body when a person has their gallbladder removed?*

A This is an excellent question, given the great number of cholecystectomy surgeries every year (removal of the gall bladder). Be assured that the gallbladder is a necessary organ and the body suffers in its absence. Actually, there is no organ, including even the appendix, which can be sacrificed without ill effects, as if the Lord mistakenly created us.

After the gall bladder is removed, the liver continues to make bile salts and even takes over some of the storage activities that were before hand done by the gallbladder. However, it does not do this as efficiently, therefore the intestinal tract is exposed to bile salts for a longer period of time. Because bile salts are both an irritant and a carcinogen, this likely explains why there seems to be a small increase in intestinal cancer and inflammatory conditions in one who has had their gall bladder removed. Additionally, such a person will have increased problems managing fat digestion and absorption and the end result of this is often diarrhea, which sometimes can persist for months to years.

Q *Are beans toxic?*

A The answer is yes. That is, if they are not boiled enough. However, the cooking water does not have to be drained because the toxic substances are deactivated during the boiling process. It takes at least fifteen minutes for these substances to be deactivated and then they are no longer poisonous. This is not a problem as both beans and whole grains require many hours of cooking to make them digestible and palatable.

Q *What is the ideal daily amount of fiber? Sodium? Protein? Fats?*

A Notice the comparison between normal and ideal in the chart below.

	Average American	Ideal Diet
Fat	*40%	*10-20%
Protein	*15%	*5-8%
Carbohydrates	*45%	*70-80%
Cholesterol	*700 mg	*0 mg
Salt	*10,000 mg	*500-1000 mg
Fiber	*10 grams	*30-50 grams
Water	*Minimal	*2 Liters or 8 glasses

*Percentage of total calories or total daily amount

Q *You highlighted the benefits of fiber last week for a whole host of health problems including preventing and treating diverticulosis. I am a little confused however, since I was told by my doctor that I should avoid nuts and seeds as they have a tendency to cause my diverticular disease to get worse. What's the story here? Should I "bulk up" on fruits, whole grains, and beans and avoid these other foods?*

A In answering this question, we are so happy to have a recent article (May 23, 2007) from U.S. News and World Report. Its title is "Got Diverticulosis? It's OK to Eat Popcorn" and the author does a wonderful job of sharing some very exciting research which will be of great interest to the millions suffering from this common American affliction. Keep in mind that while

diverticulosis is common here in America, it is very uncommon in countries that consume the highest quantities of nuts and seeds!

"Diverticulosis, a condition in which tiny pouches form along the inside of the colon, affects about 10 percent of people over 40, half of people over 60, and nearly everyone over the age of 80. To keep the risk of bleeding and other complications to a minimum, many doctors tell patients to avoid nuts, seeds, and popcorn for fear that the foods might become lodged in the pouches and cause irritation. But the fear seems to be unwarranted, according to data released today by University of Washington and Harvard researchers at a large meeting of gastroenterologists in Washington, D.C.

The researchers base their conclusions on a 20-year study of 47,228 men. When research began in 1986, the men were between the ages of 40 and 75 and didn't have a history of diverticulosis. But after 18 years of follow-up, diverticulosis with complications had appeared in some of them: 303 men developed profuse bleeding, and 801 had developed an infection that causes abdominal pain.



The above pictures show diverticular disease viewed from outside and inside the colon.

All the study participants were surveyed every four years about their nut, seed, and popcorn consumption. Researchers found no significant correlation between consumption and complications; in fact, men who ate the most popcorn were 28 percent less likely to be affected than the men who ate the least. "People with diverticulosis don't need to avoid seeds, nuts, and corn." says Lisa Strate, a gastroenterologist at the University of Washington and the lead author of the study.

Medical experts say that the best way to avoid complications from diverticulosis is to eat a diet rich in fiber, drink plenty of water, and exercise regularly. High-fiber foods include whole-grain breads, cereals, and crackers; berries; fruit; vegetables, such as broccoli, cabbage, spinach, carrots, asparagus, squash, and beans; brown rice; bran products; and cooked dried peas and beans." (Special thanks to the U.S. News & World Report author Adam Voiland).

Isn't that interesting! Not only are nuts and seeds not harmful, the truth is 180 degrees the other direction; they actually reduce disease frequency. Yes, we can trust are loving Creator!

Q *What is the difference between insoluble and soluble fiber, and how much do I need of each?*

A Insoluble fiber swells when introduced to water (think sponge). Once it is bulked up in our intestines, it pushes waste material through, easing constipation and reducing the likelihood of hemorrhoids, colon cancer, and diverticulitis (an inflammatory condition of the large intestine). Soluble fiber, on the other hand, dissolves in water,

forming a gel that binds cholesterol in our intestinal tract, which in turn, lowers blood cholesterol levels and heart disease risk and steady's blood sugar levels to reduce our risk of type 2 diabetes.

For optimal health, we want a balanced mix of both kinds of fiber: between 30-50 grams total per day. Good sources of insoluble fiber include whole grain breads and cereals and vegetables complete with their skins. For top sources of soluble fiber, reach for fruits, beans (garbanzo, lentils, and pinto), and oats. Again, the key is to eat freely of unrefined, whole plant foods and we will be sure to get plenty of this most healthful nutrient.

Q *Doctor, I do not understand it. I used to be able to sit down to a table, having all manner of improper articles of diet on it (of course, then I did not fully appreciate their harm) and partake of it freely, without any apparent harm. I just got up and went about my day and nothing ever bothered me. However, I have been trying, for the past two years, to improve the healthfulness of my diet and have noticed something that perplexes me. When I go back home and my mother prepares some things that are only mildly unhealthful, I often find that I am sick, even for days afterward. Can you explain this to me?*

A A great question and a common experience. Indeed, in reality "only when we are intelligent in regard to the principles of health reform can we be fully aroused to see the evils resulting from an improper diet."

The amazing truth is that unhealthful

food and persistent sin (repeatedly doing wrong) have a lot in common. Let's say a few words about the spiritual aspect of this issue before turning to the physical problem in the above question.

As we study the Scriptures, we learn that the unpardonable sin is committed as one persistently refuses the teaching of the Holy Spirit; one who has, day after day, chosen to reject light; one who refuses to do right, because they love sin and the pleasures of this world. In such a person, the voice of God becomes ever quieter and then finally it is completely and forever extinguished. This is the unpardonable sin.

In contrast, as we surrender to the teaching of the Holy Spirit on a daily basis, we become ever more aware of our own wrong thoughts and actions. Self and sin become more unsavory; more evil and contemptuous to us.

Further, let's soberly remember that there are only two camps as far as Heaven is concerned. Those who are growing in grace (overcoming wrongdoing) and those who are heading straight toward the unpardonable sin (with no interest in correcting wrongdoing). There is no neutral Switzerland of religiosity.

Having this as a foundation, let's move from spiritual to physical. When we are first brought face to face with our wrongdoing, by the Holy Spirit, we are convicted by the Spirit of the problem. In the same way, our first reaction to unhealthful items of food or beverage is distress. However, if we persist in using these unhealthful foods, we may eventually get to the point where they no longer bother us. Over time, our body adapts to the irritation and

we no longer experience the distress. In the same way that we can progressively dull our consciences, so that eventually, wrong seems right and right seems wrong, persistent indulgence in unhealthful foods can ultimately neutralize our body's early warning system of distress!

Take the adaptation that we do to pepper. Pepper is a common item of diet in American menus. Most people who use pepper regularly have no gastric distress from it. However, just let, such a one be off pepper for awhile and then reintroduce a little pepper. This sequence of changes will commonly induce a stomachache because the stomach has again become sensitive to pepper.

It is important to realize that we experience distress (symptoms) so as to be warned that tissue is about to be injured. Therefore, a stomachache means that something is wrong. Note the following quote, "Those who, after seeing their mistakes, have courage to change their habits, will find that the reformatory process requires a struggle and much perseverance. But when correct tastes are formed, they will realize that the use of food which they have formerly regarded as harmless was slowly but surely laying the foundation for dyspepsia and other diseases."

Right dietary habits promote mental superiority. Intellectual power, physical strength and longevity, these all depend upon what are called 'immutable' laws (unchangeable). While we may break man made laws, and if not caught, experience no ill effects, immutable laws like the laws of health carry with them a built in penalty. If we break them, we always pay! We may

not always realize that we pay, but that is because of the goodness of God. He has created within each of us an enormous bank account from which we can pay out some and be entirely unaware that we have done so. That is, until the time finally comes, when we have no more reserves and we are diagnosed with a dreadful disease. Sadly, it is then that we begin to be sorry that we paid so little attention to God's health laws. Many of us believe, we are getting by with the taxes from these broken health laws, but this is only a delusion that too many discover when it is too late.

How many speak almost proudly of their iron stomach, unaware, that they are simply bragging about having reached the point of having completely lost their early warning systems for disease!

Q *A friend suffers from hypoglycemia syndrome and he saw a dietitian, who has placed him on a high protein diet, with meals every 2-3 hours. He gets weak and lightheaded if he does not eat every 2-3 hours. What would you advise?*

A Let's use this very good question to more fully develop and discuss the high-protein diet. We find that this is not only a popular diet with weight loss programs but is also advocated by many doctors and dietitians; especially those treating people with diabetes. Its newest incarnation is called the Atkins diet. Let's discuss the physiological effect of the high protein diet on our body systems.

First, let's understand a concept called the specific dynamic action of food. This is the stimulus given to the metabolism mainly by proteins, but also, to a lesser degree, by

carbohydrates and fats. A high protein diet stimulates our metabolism. Put another way, it artificially 'revs up' our engines. This stimulus acts as a tax, not a relief, to the body. In other words, the protein in a meal increases the production of heat in the body by about 30%. Carbohydrates and fats also increase the heat production but only by about 5%.

We can see, by this difference, that protein puts a strain on the body simply by artificially increasing our metabolic activity. This 'stimulating' effect produces the increased sense of well being, or the 'high' that one feels on this diet. While this feeling is pleasurable for some, it is no better for the body than the use of caffeinated products, amphetamine like diet pills, nicotine products, or other artificially stimulating drugs. While the metabolic fires burn hotter, by virtue of the excessive quantities of protein, there is at the same time an increased production of toxic waste material. ***This is a major cause of the premature onset and epidemic numbers of degenerative physical and mental diseases seen in our society.*** The use of a high protein diet, especially adds to the burden of the kidneys, the liver, and the gastrointestinal tract.

This is the same reason why some who begin a vegetarian diet mistakenly abandon the effort. The change in diet, often to a lower quantity of protein, induces a short term feeling of weakness, as their body makes the adjustment. While the stimulatory effect of meat and other animal products is lost however, there is no actual reduction in muscular strength or endurance, but only a sensation of weakness. The sensation usually disappears in about five to seven days.

From the above discussion, we can now answer some questions that may have puzzled us. Why do we feel especially tired after lunch? (hint: warmth). Why does the blood cholesterol often decrease in one who has begun a high protein diet? (hint: cancer). Why does a high protein diet frequently require five to six meals per day? (hint: hypoglycemia). Why is a high complex carbohydrate diet associated with longer life and less frequent episodes of ill health? (hint: the whole class).

Q *Could you also comment on the Atkin's diet, which emphasizes this concept of a high protein diet as being beneficial to some of our goals including weight loss and lower cholesterol?*

A Some have this idea that the way to get healthy is to eat a high protein diet (the Atkin's diet). Now it is true that one can lose weight on this type of diet. Additionally, a high protein program can lower our cholesterol as well as our blood sugar, blood pressure, and triglycerides. Sounds good, doesn't it? Well, let's burst the bubble with the reason **why** these things happen and then see who still wants to sign up!

The reason why this diet causes the above changes is because it causes the adherent **to get sick!** A high protein diet (the Atkin's diet) causes people to get sick; they get nauseated, fatigued, experience headaches and many other uncomfortable symptoms. Now one of the side effects of getting sick is that our appetite goes down. And when we don't eat, our weight goes down, our cholesterol, our blood sugar, our blood pressure and our triglycerides all go down! Do these changes happen because


START HERE

"We are fearfully and wonderfully made."

Burn for Energy	Waste products
Carbohydrates	CO ₂ and Water
Protein	Bad Stuff (Sick)
Fat	Ketones

Ketones ⇌ Hunger Drive ↓

God designed our body to go into ketosis under two circumstances.



we are getting healthier? No, they happen because we are sick! The Atkin's diet works (?) because it makes the individual sick.

The result of eating a diet that has an inadequate amount of carbohydrates to meet our energy requirements, as with the Atkin's diet, is that our body begins to burn fat for energy. A byproduct of fat metabolism (burning fat) is that chemicals called ketones are produced and these ketones suppress the hunger drive.

Now God designed the body to go into ketosis under two circumstances. The first is when we are seriously ill. When we are seriously ill we are not supposed to be gathering and preparing food, we are supposed to be resting and recuperating. So we burn fat, produce ketones, suppress our hunger drive, so we can rest. The second circumstance is a God given blessing and that is when we are starving to death. In this situation, the individual goes into ketosis so that it does not literally hurt so bad to die. After about three days, ketosis sets in, the hunger pains decrease and the pain of dying is lessened.

So the Atkin's diet simulates sickness and the dying process!

To illustrate this point further, we might mention a therapy some doctors use that also decreases weight, cholesterol, triglycerides, blood pressure and blood sugar. Indeed, all these disease risk factors get better with **cancer chemotherapy**! The drugs utilized to fight (?) cancer make the recipient sick and cause them to lose their appetite and set in motion the exact same chain of events as does a high protein diet.



If we are trying to gain improved health and wellness, recommending a high protein diet makes about as much sense as recommending cancer chemotherapy!

***Addendum

If this story isn't sad enough, given the millions of Americans who try these diets every year, remember also the discussion in program number seven, which outlines the causal relationship between animal proteins and the dreaded disease of cancer.

Q *I have heard from my doctor and many magazine articles that taking estrogen tablets will help my bones stay strong and avoid osteoporosis. What do you think?*

A Here we have another one of those besetting errors in modern medicine. The paradox of estrogen is that while it does cause thickening of the bones, especially about the outer cortex (the bone's skin), this lasts but for a short time. Thereafter, it actually causes the bones to become thinner. Persistent use of birth control pills and steroids both can cause osteoporosis,

so it is not surprising that the artificial use of another type of steroid, that is, estrogen, also causes, rather than prevents osteoporosis.

Q *Are there other habits that can lead to osteoporosis?*

A There are two other habits, common to Americans, which can quickly lead to weakness of the bone structure. These are smoking and coffee consumption. Smoking is without a doubt the worst of all non-dietary habits undermining our health. Yet, it is a surprise to many, that coffee consumption is almost as detrimental to our bone health as is smoking.

One 'innocent' cup of coffee per day causes us to lose 1.4% of our bone mineral per year when we are past the age of fifty. What percentage was that again? 1.4% per year. How much would that be in a decade? 14%! Therefore, one cup of coffee per day starting at age fifty, may cause a woman to lose up to 14% of her bone mineral by the age of sixty. On top of all the other bad habits, we are now beginning to understand why American women are experiencing an epidemic of osteoporosis.

Q *How much calcium does a healthy person really need and from what foods can I obtain this amount?*

A Before we answer this question, let's review two facts discussed last week. First, it is much more important to determine how much calcium is being 'spent' by the body in buffering the system, than in knowing the amount of 'deposits' being made by way of our diet. Let's remember that no amount of calcium in the diet can

keep up with the losses from a bad diet! Second, without exception, the countries with the strongest bones have the lowest calcium and dairy intake and the countries with the weakest bones have the highest calcium and dairy intake.

Do not these facts really diminish the importance of this question?!

A further consideration is that one cup of whole fresh cow's milk has 288 mg of calcium while one cup of human breast milk contains only 80 mg of calcium. Clearly, we do not need as much calcium as a cow (or animals in general) requires.

How about collard greens? One cup of collards has 304 mg of calcium. Hey, isn't that more than a cup of milk? Why is it that the National Dairy Promotion and Research Board, a group that claims to be so very interested in our bone health, does not say, "folks, be sure to get plenty of collards every day." Why have we never heard that collards have more calcium than cow's milk? The reason is that there is no National Collards promotion board. If there were, we would probably have heard about it. It simply is not a very lucrative business to talk about collards as being high in calcium.

Dr. Mark Hegsted, one of the deans of nutrition in this country, then gives the answer to our original question. He has stated that a normal adult only needs about 126 mgs of calcium per day in contrast to the government's proclamation of between 1000 and 1500 mg per day.

Q *Recently, my doctor told me that my bone density test revealed significant osteoporosis. He recommended that I begin to take some*

calcium supplements and a medication called Fosomax every day. What additional information can you share about the accuracy of this test that might help me decide whether I want to spend the money (about \$1,000/year) and risk the possible side effects of this medication?

A It is possible that the diagnosis of osteoporosis is surrounded by more confusion than any other health problem. The confusion lies both in the cause (animal protein and their acidic nature) and the diagnosis (bone density testing). While most everyone believes that osteoporosis is caused by the lack of adequate calcium; this is 100% scientifically untrue! Interestingly, the countries with the highest intakes of calcium (and dairy products) have the **most** osteoporosis; without exception! We reviewed this issue during the third week of the program (page 42-47).

Let's list some interesting facts about bone density testing (BMD):

- Bone mineral density (BMD) is often **increased** by osteoarthritis.
- A high BMD has been linked to a **higher** risk of breast cancer.
- Although high BMD is linked both to **increased** breast cancer risk and decreased osteoporosis, breast cancer and osteoporosis nonetheless cluster together in the same areas of the world and even in the same individuals.
- High animal protein intake is **closely** associated with osteoporosis.
- Rate of bone loss matters just as much as overall BMD.
- There are places where bone mineral density are **lower** than they are in "Western"

countries, but the fracture rate also is **lower**, defying accepted logic of how we define "big, strong bones."

- Bone mineral density (BMD) is often **increased** by obesity, even though areas of the world that have **higher** rates of obesity also have higher rates of osteoporosis.

The bottom line is that some women may benefit from knowing their bone mineral density alone, but that number is probably quite small. This is because in the majority of cases BMD alone cannot reliably diagnose a problem. Factors such as ethnic background, body size, and family history must also be factored into the discussion of osteoporosis. Interestingly, smaller women are especially misdiagnosed. Ignoring body size is analogous to measuring blood pressure with the wrong size cuff.

It is also vitally important to know the rate of bone loss. This can be measured with various bone marker tests such as the Serum or Urine NTX. These tests answer the question of whether the person is actually losing bone. Many ladies with small frames are diagnosed with osteoporosis, yet after their NTX returns normal, it is clear that they have no disease at all. Sadly, very, very few women being treated with drugs for osteoporosis have had this test.

The above discussion begs the sad question; How many folks are being treated with medicines for absolutely no reason? Too many!

Q *Is distilled water okay for drinking?*

A Yes, it is. We sometimes hear people say that there are no minerals in distilled water. Yet, this is okay. We are not dependent on water for our minerals but rather on fruits, grains, and vegetables, nuts, and seeds. Distilled water is pure, soft water. This is the best water.

Of course, an adequate amount of water is necessary everyday and the lack is a significant part of what ails us in this country. Ultimately, the quantity of fluid that we should drink everyday is the amount necessary to cause our urine to be pale. Not entirely colorless, but pale. If it is colorless, we are probably washing out too many of our B vitamins.

Q *Can you spend some more time developing the concept, previously discussed, of good, better and best in relation to our dietary habits?*

A This question will afford us an opportunity to develop some additional and important concepts. Let's begin with a study, illustrated just below, which will help

START NEW			
Good, Better, Best Principle			
Males age 35 and over as percent of expected in comparison with general population			
Group	Coronary (heart) death rates	Cancer death rates	
General Population	----	---	
'clean' meat eaters	56%	40%	(Good)
lacto-ovo vegetarians	39%	25%	(Better)
total vegetarians	14%	3%	(Best)
The 'best' diet and lifestyle reduced the frequency of dying from heart disease by nearly ten times and of dying from cancer by over thirty times!			

us not only get at this good, better, best principle and the progressive dietary change we are after, but which will also allow us to introduce a biblical concept that will tie this all together.

In this fascinating prospective study, the researchers tabulated the frequency of coronary (heart) and cancer death rates in four different groups. The first group, 'clean' meat eaters, had a 56% and 40% frequency of dying from heart disease or cancer, respectively, as compared to the general population. The rates for lacto-ovo vegetarians were 39% and 25% and for total vegetarians were 14% and 3%, respectively. Wow! The 'best' diet and lifestyle reduced the frequency of dying from heart disease by nearly ten times and of dying from cancer by over thirty times!

Okay, well we had better define some terms. What is a 'lacto-ovo' vegetarian? What is a 'total' vegetarian? Finally, what are 'clean' meat eaters? The answer to these questions will help us to better understand the good, better, best question.

First, a 'lacto-ovo' vegetarian is one who avoids flesh or meat-based foods, but continues to eat dairy products, such as milk, cheese, eggs, yogurt, butter and ice cream. This contrasts with a 'total' vegetarian, who avoids all meat and dairy products. This, then, is the 'best' plan; that is when we eat solely from among the unrefined fruits, vegetables, grains and nuts. These two diets represent the better and best choices, respectively. Further, this study reveals the progressive decrease in disease rates to be generally expected as we progress from bad to good to better to best along our

continuum of progressive change.

Wait a minute! What happened to the 'good' of good, better, and best? What are 'clean' meats referring to? And for what purpose is the animal kingdom beyond our food supply? To answer these questions, we will need to discuss God's janitorial system. Let's spend a few moments doing so that we might better appreciate the goodness of God in seeking to draw His rebellious children all the way back to His original plan before the intrusion of sin and death (Romans 6:23).

It is a little known fact that we are currently living under plan B. However, it is fascinating to understand that after the entrance of sin, God made some immediate and necessary adjustments so that His creation would not quickly expire. The Lord answered the crisis of death with a janitorial system that prevented the planet from quickly descending into a revolting cesspool of disease which would otherwise have wiped out its population.

Knowing that men and beasts were starting to die, God created some janitors to come along and clean up the mess of death. Indeed, there are many animals whose job it is to eat karion or dead flesh. If the dead animal is small, He created a janitor that flies and he is called a buzzard. When a huge animal, like an elephant or giraffe dies, God has some bigger janitors like the hyena, the jackel, and the King vulture and in just a little while they clean up these big animals.

Now, then, if the creature dies underground, God made an animal with a shovel on the end of its nose to root it out. We call him a pig. If the creature dies in the sea, God could not use a buzzard or a hyena, so He created some creatures that

absorb decaying flesh and filth in the bottom of the water. We call them catfish. Most cat fishermen know the fattest catfish are commonly found at the mouth of the sewer. Interestingly, clams and oysters really do not even move. They simply latch onto the decaying flesh, hang there, and absorb it away. That is why clams are not found floating around in the water but rather at the bottom where they clean up the filth that falls to the bottom of the oceans.

As an illustration, consider a home aquarium. Those who have had an aquarium know of the necessity of establishing the interdependent cycle of life. For example, if we buy a goldfish and put him in a bowl, we will soon find out that if we do not change the water every other day or so, he will die. However, if we set up our aquarium properly, we will not have to clean out the tank so frequently. First, we have the fish that give off carbon dioxide. Then we put in some plants that absorb carbon dioxide and give off oxygen. In addition, we need some snails in there to clean up the excrement and other filth. This is what keeps the aquarium clean and fresh. We call it the interdependent cycle of life. Well, God has that same thing on earth. He has animals to clean up filth. He has janitors.

Now can we imagine what this world would look like in just one month if God's janitors went on vacation? A pretty disgusting thought, isn't it? Okay, let's erase that image from our mind and finish up the story.

Now that we have a general understanding of the janitorial system, we can appreciate why the Lord has carefully instructed us on what animals are safe to

eat (clean) and what foods were not made safe to eat (unclean). After the fall of man, our total vegetarian diet (Genesis 1:29) was supplemented with vegetables (Genesis 3:18). Then, after the flood destroyed our food supply, God permitted meat consumption on a *limited, temporary basis*. He carefully instructed Noah to collect the 'clean' animals by sevens and the 'unclean' animals by only twos (Genesis 7:2,3). Since He was allowing the 'clean' animals as food, if there had been only two they would rapidly have become extinct after the flood. Thus, He reaffirmed to Noah, and later to the Israelites (Leviticus 11 and Deuteronomy 14) the need for the 'unclean' animals (His janitorial system) and the necessity of the extra number of 'clean' animals to be saved through the flood.

Thus, we now better understand why God says, "now if you want to obey me and if you want good health, leave off any animal that does not have a split hoof or does not chew the cud and leave off any fish that does not have scales and fins. By reading, the two chapters mentioned above, we can understand which animals, fish and fowl are safe and which are not.

Interestingly, some thirty years ago, the United States Navy commissioned a group of scientists to produce a report to help their men know what fish would be good to eat if they became lost at sea. This report took many years to research and was hundreds of pages in length. Yet, upon its completion the scientists were a little embarrassed to conclude, "the rules given by God in Leviticus 11 accurately describe the fish we found to be safe for food."

What a great God we serve! Again,

we do not have to be scientists to know the truth. What a plan! Just as only 'clean' animals were allowed to be sacrificed as a representation of the Lamb of God, so too does God require His children to avoid eating any unclean thing. Since He considers His children's bodies to be His Temple (1 Corinthians 3:16,17), we can understand why He calls 'unclean' foods "abominable" (Isaiah 65:3 and Deuteronomy 14:3).

Yes, indeed, we can eat and drink in a way that brings glory to the Lord (1 Corinthians 10:31). Oh, what a joy it is to please Him, who gave His all for us (Ephesians 5:10)!

Q *What is the effect of cooking food on its nutritive values?*

A We lose about 5% in nutrient value with every type of processing, even if our processing is not refining foods (i.e. grinding whole grains, or toasting bread). We still lose about 5%.

Q *What is the word on avocados and olives?*

A Avocados, like olives, are high in fats. However, they have a very good quality of fat (mostly monounsaturated). The only problem with avocados is that they are expensive and not all that available. We wish they were available all year round and then everybody might best have a little bit everyday. By the way, too many avocados will have a laxative effect. We would love to live in a country where we could eat too much!!!

Olives are very healthful. They are good for the digestion, the kidneys as well as for those with tuberculosis. What is the

proper amount of olives? It depends on one's weight. For instance, if we had a gastrointestinal problem, like an ulcer, then we would want to have maybe 6 to 12 olives. However, if we were over weight, then we would probably want somewhat less and if we are under weight, we might benefit from somewhat more.

Q *What can be done for my cold extremities?*

A Many people struggle with cold extremities. Some think that women are born with cold feet and retain them their entire lives. This is not true. Some cardiologists have been known to teach their student doctors that if their patient's wife has warmer feet than her husband, then the husband must have bad arteries.

We need to learn to properly clothe our extremities. What gives us warm feet? Is it putting on socks? No. That will simply insulate our icicles down there! Rather, we must put good clothing on our thighs and knees. We have some large blood vessels that are very close to the surface behind our knees. Therefore, if the thighs and the knees are not kept warm and insulated, then as the blood is pumped from the heart, there will be a significant heat loss from the blood in this area. Thus the blood will have much less warmth to it when it gets down to the feet. This cooler blood then causes the feet to be cold. Then because the feet are cold, the blood vessels in the feet clamp down and blood is shunted by the collateral vessels back up to the heart and this perpetuates the situation for hours. By preventing the heat loss in the thighs and knees, the problem can often be solved.

Q *I have heard that fish are healthy for my heart because of the omega-3 fatty acids. Why do you say they are not good for us?*

A Fish do indeed contain omega-3 fatty acids, which are good for us. However, fish also have elements that promote disease, including excessive protein, cholesterol and environmental chemicals like methylmercury, dioxins, and PCBs. These elements increase our risk for strokes, cancer and many other health problems. Yet, nothing is wrong with walnuts and they like most of the nuts and seeds are high in the omega-3 fatty acids.

Q *Several times in the past few years I have experienced excruciating pain on the side of my big toe. It gets red, swollen and PAINFUL! My doctor has told me that it is gout and is caused by an excessively high uric acid level. He has recommended medicines to treat the pain and bring down the blood levels of this chemical. Please tell me more about the cause of this problem and any dietary changes that would be helpful.*

A Indeed, this is often an incapacitating illness. Let's say right off. Gout is a disease of too much protein intake and overeating! Scientifically, it is a disorder precipitated by elevated blood levels of the waste chemical uric acid caused by excessive intake of purine rich foods and reduced uric acid excretion (removal via the kidneys).

Therefore, to treat or prevent gout we want to avoid high purine foods (high protein foods), that is, all meat, poultry and fish as well as the other situations that invite a high uric acid (obesity, alcohol, overeating).

Notice that some members of the vegetable kingdom can slightly increase the uric acid levels and these include the legume family (beans, lentils, peas, and peanuts), as well as mushrooms, spinach, and asparagus.

Drinking plenty of water and eating freely of fruits will help rid the body of excess uric acid. Be aware that a fast, while usually very helpful, is not recommended when our uric acid is already very high, or if we are having a gouty attack, as the rapid weight loss can temporarily increase the uric acid in the blood. Strawberries and cherries are reported to make the uric acid go down, and we might, with great benefit, use them generously to reduce our level of uric acid. Flowers of the broom plant, from which tea is made, have also been known to help gout.

While medicines are often helpful for the initial pain associated with this concern, it is best to incorporate the above dietary lifestyle changes for prevention of future episodes. Remember, gout is our body's attempt to caution us regarding our poor dietary choices and warn us of greater health problems on the horizon.

Q *Are there any foods that seem to cause arthritic problems to be worse?*

A Yes, there are a group of foods that together are called nightshades. They all contain chemical alkaloids, which can irritate our joints and cause increase swelling and pain. The nightshade family includes white potatoes, tomatoes, peppers, eggplants, pimentos, tobacco, and dairy products (this from cows eating wild nightshades and then passing it on through their milk).

Amazingly, we have found that a short experiment (i.e. ten days) avoiding all dairy products and processed sugar will dramatically improve the pain of arthritis (and all other pain syndromes) more effectively than any other treatment we have yet discovered!

Q *Many of the foods and drinks we buy today have an additive called high fructose corn syrup listed on the nutritional label. Please give us some more information on this form of sugar (?) and its impact on our health.*

A This certainly is a timely question considering that the use of high fructose corn syrup (HFCS) increased by more than 1000% in the last 25 years of the 20th century. Now before we review some of the facts about this processed sugar, let's be mindful that this is another story of the prideful abuse of wisdom (Ezekiel 28:17). We can **never** improve upon God's design! When we try we always create unintended consequences (in this case more disease).

Okay, some background. Fructose is the most powerful sweetener of all naturally-occurring sugars; even table sugar (sucrose) owes much of its taste to fructose. (Sucrose is a combination of two sugars; glucose and fructose). Back in 1971, Japanese food laboratory scientists synthesized a **cheaper** sweetener called high-fructose corn syrup

(HFCS). The goal of this work was to create a sugar additive that could be used in frozen foods as protection from freezer burn, as well as in baked goods and vending machine foods to hold freshness.

Now corn is the most common source of this kind of sugar and thus the designation high fructose corn syrup (HFCS). In 1983, Coke and Pepsi switched from a fifty-fifty mix of sugar and corn syrup in soft drinks to a 100 percent high-fructose corn syrup sweetener. This cheap brand of sugar now represents over **40% of the caloric sweeteners** added to foods and beverages, and is the sole sweetener used in soft drinks in the United States. University of Toronto researchers fed hamsters a high-fructose diet (similar to soft drinks and processed foods containing corn syrup) to mimic the diet of young adult humans (the hamsters have a metabolism similar to humans). Within a few weeks the hamsters developed high triglyceride levels in their blood, and insulin resistance; the precursors of diabetes, heart disease and obesity.

De novo lipogenesis (the synthesis of fat from sugar in our body) occurs readily with fructose, whereas with other kinds of simple sugars, like glucose, this synthesis does not commonly occur. Many experts blame the recent rise in obesity on high fructose corn syrup consumption. Further, fructose affects hormones very much like the way that fat does; it increases hunger, which results in more dietary fat and food intake. In addition, fructose does not stimulate brain satiety, as glucose does.

An amazing list of unintended consequences, indeed!

Fructose Promotes Obesity by:

1. Increasing hunger
2. Increasing fat intake, food intake, and caloric intake
3. Not stimulating brain satiety
4. Promoting the creation of fat

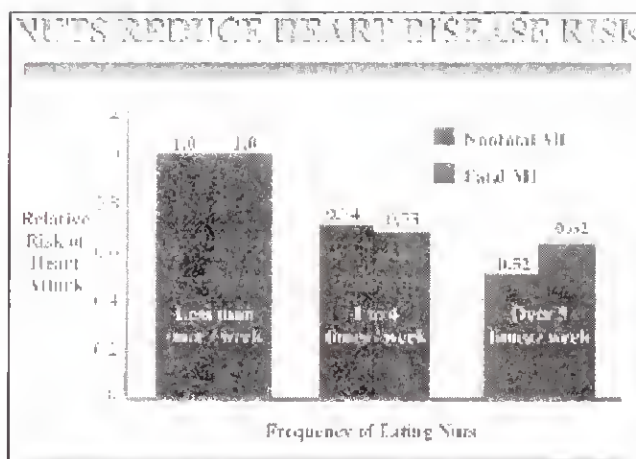
Q *Can you go over the benefit that eating nuts has on preventing heart disease?*

A It is well known that high blood pressure, high cholesterol, cigarette smoking, and diabetes mellitus are major risk factors for this disease. However, as we have studied, dietary habits are really at the root of this all too frequently fatal disease.

We have previously discussed the diet connection. It is of further interest that the latest research has shown the strong protective influence of eating nuts on the risk of heart attack. Those who ate nuts greater than 5X per week had only half the risk of a heart attack as those who ate nuts only once per week or less. It is important to note that those who ate nuts frequently typically had only a small handful on each occasion. It may be that larger quantities are not so beneficial.

Q *We have been running into an idea called glycemic index. Can you talk about that?*

A Glycemic index (GI) is the measurement of how high and for how long a specific food raises the blood sugar. The GI is one quality of food. Just as there are many ways by which we might describe a person (height, weight, hair color, personality, etc.), there are also numerous measurements of



the way nutrients act within our bodies.

Scientists are struggling to understand the importance of the GI (even the scientist who discovered it (!). Yet this has not stopped some from taking this one measurement only and building a whole philosophy of nutrition. They suggest that for the best health we should be focusing on foods that have the lowest GI. This idea should quickly raise our eyebrows as we notice the table, just to the right, which shows many high quality foods with a high GI score and many poor choices with a low score.

Indeed, a potato has a worse or higher

Low GI Doesn't Necessarily Equate with Healthy

Junk Foods with GI less than 40

Chocolate Cake (38)
Nestle Quick Strawberry Drink (35)
No Bake Egg Custard (35)
Sara Lee Premium Ice Cream (37)
Chocolate Milk with Sugar (34)
M&Ms with peanuts (33)
Pizza Supreme (30)
Egg Fettuccine (32)
Fructose—a pure sugar (19)

Healthy Foods with GI greater than 80

Nabisco Shredded Wheat (83)
Corn Meal Porridge (109)
Jasmine Rice (109)
Brown Rice—Calrose (87)
Corn Thins (87)
Baked Potato (85)
Boiled Potato (101)
Parsnips (97)
Carrots (92)

score than white sugar! Fructose has the lowest or the best glycemic index score of all. That's the predominant sugar in high fructose corn syrup. Fructose is 20, white sugar is 100 and potatoes are like 115. Yet fructose is totally empty calories. It is the sugar that raises cholesterol and triglycerides more than any other sugar, however it is the best food according to the glycemic index.

Further, we should mention that different studies find widely varying GI values; for example, sweet corn has been found to have a GI of 37, 46, 48, 59, 60, and 62. Cooking and cooling changes the food's GI. The ripeness of the food increases the GI. Disrupting a food's dietary fiber by grinding, and also removing the fiber, make carbohydrates more easily absorbed, increasing the GI. To further complicate the picture, mixing foods together results in a GI of the meal that cannot be predicted from the GI of the individual foods. Therefore, even with great effort you will likely be way off your target GI.

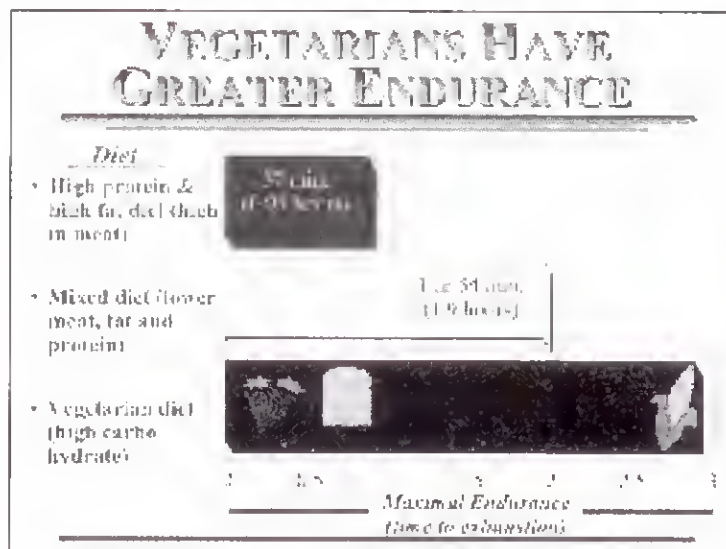
So this gets quite confusing. We have to consider all the qualities of the food. And in the end of the day, we have to apply our principles of trusting in the Lord and the good food that He has made and which He recommends for us to eat.

Q *What a minute! I can see that the total vegetarian diet will increase the length of my life and decrease my chances for virtually all known diseases. However, I am concerned I will feel weak all the time. I am concerned that I will not feel as strong or as robust.*

A Okay, let's start from the top. Modern scientific research reveals that through proper diet and lifestyle habits we can increase our chances for a long and healthy life. In fact, a nonsmoking, lean person who emphasizes fruits and vegetables, and exercises moderately, can reasonably expect to live an average 6 to 10 years longer (though some add 20 or more years) than a relatively obese individual who does not exercise regularly and who consumes a high amount of fat and meat (typical American diet).

Further, it is not just the length of life that is improved by this healthy lifestyle. Rather, it is also their quality of life. Such an individual has a substantially lower incidence of all major diseases including heart disease, diabetes, adult cancers as well as most other common maladies.

What about the benefits of the vegetarian diet beyond its resistance to many diseases? There is a popular myth that one will feel weaker and less vigorous on such a diet. What does science have to say about this almost universally held belief?



The picture above compares the performance of a group of highly trained athletes on three different diets. Each of these athletes pedaled a bicycle at high speed until exhaustion. It is interesting to note the dramatic increase in stamina displayed by these athletes as they were changed every three days from a high protein & high fat diet (high in meat) to a mixed diet (lower meat, fat, and protein) and then to a vegetarian diet (high carbohydrate).

This dramatic increase in endurance does not surprise keen observers of the animal kingdom. After all, the ox, the elephant, and the horse have no problems with strength or endurance on a vegetarian diet. Horses can run at high speeds for hours. Further, it is interesting that elephants, weighing in at 12,000 pounds, are noted for running 10 to 12 hours continuously at high speed (25 mph). On the other hand, meat-eating big cats such as cheetahs, tigers, and others have great speed at the start, but they fatigue within a short time, often within less than 5 minutes.

Clearly, stamina is dramatically greater in the vegetarian, however what effect does this diet have on muscular strength? Staying in the animal kingdom, we might consider the gorilla, which is pound for pound one of the strongest animals in the world. Of course, the gorilla is a total vegetarian.

Q *What do you think about eating yogurt?*

A Dairy consumption increases breast cancer, ovarian cancer, and prostate cancer. For ovarian cancer, there is

a particular association to the already fermented dairy products like yogurt, cream cheese, cottage cheese, and buttermilk.

Q *Should vitamin or mineral supplements be considered medications?*

A What is a drug? A drug is a chemical compound, which is highly concentrated so that we can get a therapeutic dose. It is a larger dose than nature normally supplies. Obviously, when we take an aspirin tablet, we get more aspirin than we get from drinking a cup of tea with bark that has some aspirin derivatives (salicylates) in it. An aspirin tablet is a concentrated product. When we take a vitamin C tablet, we are taking more vitamin C than we would get from drinking a glass of tomato juice or eating a tomato. The truth is that these are essentially highly concentrated food products.

Again, we have been victimized by some word magic with these nutritional supplements. The vitamins that we buy and take are really in every sense drugs. This is why the Food and Drug Administration (FDA), much to the chagrin of the people who sell vitamins, has put a limit on what they can sell in a vitamin



tablet without a prescription. They do not want very large doses sold to the public. In the end, supplement manufacturers have not really minded these laws. Instead of recommending one 5000-mg tablet per day, they simply advise on their labels for us to take three 500-mg tablets, three times per day.

Q *If I avoid all meat and dairy products should I be concerned about inadequate vitamin B12 intake and start taking a daily B12 supplement?*

A It has been postulated by some that only animal products contain sufficient quantities of vitamin B12 to meet human needs. This is not the case and many pure vegetarians live a lifetime without evidence of B12 deficiency. Indeed, if searched for the cause of B12 deficiency can virtually always be found in an area **other than** the absence of animal products in the diet. Actually, until the last few years, the lack of B12 in the diet was not even thought of as a cause for a deficiency disease. Rather malabsorption (as found with stomach or intestinal inflammatory diseases), increased need (as found with meat eaters), or increased elimination (again, found in the above two situations) were considered to be the most likely causes of a deficiency case. These being the true causes of a B12 deficiency condition, it is not surprising that though this is not a particularly common affliction, the **overwhelming majority of cases occur in non-vegetarians!**

An additional fact to ponder, as we consider taking Vitamin B12 supplements, is that studies, in both animals and

humans, have shown an **increased** incidence of cancer in those receiving high doses of Vitamin B12.

Forgive me for piling on but... the latest studies are showing that supplementation with Vitamin A and Folic Acid also **increases the rate of cancer**. It is our firm belief that all high dose nutrient supplements will eventually be found to actually cause cancer!

Q *I have been participating in the STARTNEW program for the past 8 weeks and I am very excited about the benefits that I have realized in such a short period of time. However, I was a little shaken when I saw that my HDL-Cholesterol (the good stuff) has gone down since I had it checked two months ago. Should I be concerned?*

A There is a lot of confusion today about cholesterol in general and also about the different types of cholesterol that we have in our bodies. HDL-cholesterol, or high density lipoproteins, commonly referred to as "good" cholesterol, is one fraction of total cholesterol (other fractions are classified as VLDL (very low-density lipoprotein), LDL (low-density lipoprotein), and MDL (medium-density lipoprotein).

Keep the following fact in mind: **When total cholesterol is lowered, with a healthy diet, all fractions of cholesterol are reduced, including HDL-cholesterol.** This is not bad, but expected, and actually of no harm. Interestingly (and almost humorously) is the answer to the question, what is the best and easiest way to raise HDL-cholesterol? The answer is ... eat more meat (with all its cholesterol)! Is this good

for one's health? NO! While the HDL-cholesterol will go up, the risk of heart disease will also increase!

If we are having trouble understanding this concept, then maybe the watermelon analogy will help. Imagine cutting a watermelon (representing the total cholesterol) in half – we now have half as much of all the parts of the melon, including half the number of seeds (representing the HDL-cholesterol). Now double the size of your original watermelon and you now have twice as many seeds.

Consider a classic experiment demonstrating how eating cholesterol raises cholesterol in the blood. An "affluent" high-fat, high-cholesterol diet was substituted for five weeks for the traditional near-vegetarian diet of a group of 13 Tarahumara Indians – a Mexican people known to have virtually no coronary heart disease. Cholesterol levels increased by 31 percent (121 to 159 mg/dl), LDL rose 39 percent (72 to 100 mg/dl) and their HDL-cholesterol, usually low in this population, increased by 31 percent (32 to 42 mg/dl). If they had continued to eat this way they would soon have had heart disease, like their genetic relatives, the Pima Indians, living in Arizona on the Western diet – where 15 percent of males and 8 percent of females aged 40 years and over have had heart attacks, and approximately half of this population are diabetic and /or obese.

Higher HDL is associated with less heart disease only when comparing people who all eat an unhealthy diet (like Americans). Worldwide (comparing people who eat different diets) those who have the **lowest HDL levels** (like people in rural

Japan, China, and Africa) have the **lowest rate** of heart disease – and also the lowest total cholesterol. Those with the **highest HDL levels** (like people in the USA and Western Europe) have the **highest rates** of heart disease.

Just as HDL goes up as total cholesterol rises, so too does HDL levels fall as total cholesterol drops. This is the case for anyone who adopts a low-fat, low-cholesterol regimen. People on healthy vegetarian diets are sometimes told to eat meat because their HDL is only 25 mg/dl. Yet, their total cholesterol is only 125 mg/dl – a total cholesterol level that makes them virtually immune from heart disease.

Q *I am perplexed. Though many wonderful things have happened to me since I began the STARTNEW program (i.e. weight loss, improved fitness and general sense of well-being), my lipid (cholesterol) numbers have not improved. I know this lifestyle is right and I am reaping the benefits, so why is my cholesterol not better?*

A It is with pleasure that we want to answer this question, being distressed that this paradox can be a source of real concern. Yes, it is true, and seen in every program, that some will actually have their cholesterol, initially, rise during the first few weeks or months after they change their lifestyle habits. Why is this so?

We may better understand this phenomenon as we consider the very common occurrence for an individual who is fasting. Three days into a total fast, a person whose cholesterol is usually 175,

is often startled to find their cholesterol is now 250 or 300!

What has happened is that the healing process is now occurring. For years, excessive cholesterol has been deposited, in the form of plaques, upon the walls of the arteries. However, with a fast, as with a change to a plant-based, high fiber diet, the entire process reverses itself. The body begins the process of healing; now removing the waste and the blood stream is thus flooded with this waste on its way for removal.

This cleansing process, which is removing the toxins deposited throughout our entire system, can sometimes even be a source of distressful symptoms for the first few weeks of any lifestyle change. Understanding these facts is hopefully a source of comfort and patience as we continue on the pathway of life and health upon which we have started.

Q *I am learning more and more that the foods I eat have much to do with my health. But I am interested in knowing whether “when” and “how often” I eat also plays a role in determining my health and well-being?*

A Scientific research is revealing that overweightness and virtually every known disease has as much to do with the “when” and “how often” as the “what” of eating. That is amazing and poorly understood. For most of us (especially me) it is not something we have desired to consider. Why? Because this gets at the heart of our problem (yes, our other food addiction habit). Sadly, and somewhat unconsciously, we have allowed our

relationship with food to control us and therefore degrade our relationship with the Lord and His power in our lives.

It is absolutely true that a large percentage of our health difficulties have as much to do with timing, as with the foods that we actually consume. Yes, snacking, which is among the most common of American habits, is a major problem. Let's take a look at this issue for a moment.

A snack may be defined as a small amount of food eaten between meals. Is there such a thing as a “healthful snack”? In the truest sense—no, there is no “healthful snack.” What would be a health-promoting, nutritious small meal at mealtime does not constitute a healthy snack between meals because of the unhealthy timing. Of course some foods are less healthful than others—no matter when eaten. However, eating healthful food between meals does not make a “healthful snack”!

In order to understand the magnitude of the trouble that eating between meals creates, we must look a little closer at the process of normal digestion and the components needed for it. As we do so, let's keep in mind that digestion is done in a “batch mode” fashion.

“...thou givest them their meat in due season.”

Psalm 145:15

(God) gives us our (food to be eaten) at the (appointed or proper time)

“Batch” Processing Principle

When we put food in our mouth and begin chewing it, that mouthful (batch) should be all chewed completely before swallowing. Only then are we ready for the next mouthful. This batch principle is repeated in the stomach. The food eaten at breakfast, for instance, is all processed together until it is ready to be passed on to the small intestine. The stomach will not pass on any food until the whole batch is brought to the same point in processing.

The stomach does not normally empty all at once in the same way that a mouthful of food is swallowed at the same time; however, all the stomach content is brought to the stage of being ready to be passed on to the small intestines together. Therefore, if even a nut is eaten between meals, all the food in the stomach must wait until that nut is at the same stage in processing before the stomach can finish its work. If one were to snack often throughout the day, breakfast could remain in the stomach for too long a period and begin to decay and ferment; likewise for lunch, dinner, etc.

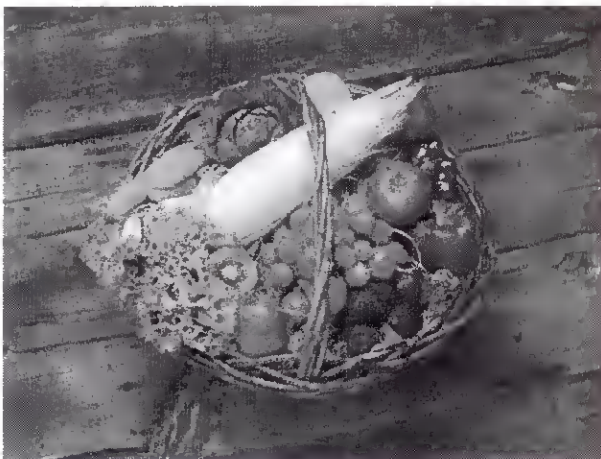
Many of the chemicals produced

during partial digestion are toxic, such as aldehydes, alcohols, amines, and esters. These cause an intoxication of brain, liver, kidneys and other delicate tissues. We all have experienced the discomfort when fermented food begins its journey through the intestinal tract!

Because of this “batch” principle of processing, it is better not to mix fruits and vegetables at the same meal. The reason for this advice is based on their respective digestive times. If the stomach contains a mixture of fruits and vegetables, the fruits have to be kept around longer than is optimal in order for the vegetable digestion to arrive at the same stage that the fruits arrived at earlier.

Again, this delayed digestion is complicated by fermentation of the fruit sugars that are delayed from absorption by the body, while it is waiting for the rest of the batch of vegetables to process. Fruits, being softer and containing a lot of water, are more easily and quickly digested. In contrast, vegetables have less water, less natural sugars and more texture than fruits, thus having a longer digestive time.

The time needed between meals to ensure the stomach is ready for the next meal is usually about 5 hours. Food that takes a longer time and food that takes a shorter time to digest is best eaten at two different meals. A good way to do this is to have fruits and grains for breakfast and vegetables and grains for lunch or switch them around if desired.



Snacking; Documenting Digestion Time

It takes the body about 5 hours, on the average, to digest and absorb a meal. This is the reason that at least five hours should be allowed between meals. What happens if food is eaten between meals? This has been studied with X-ray technology. A small amount of barium was given to test subjects along with a hearty breakfast. The barium

is not absorbed, but travels through the intestines, with the food, thus allowing the position of the food to be observed by way of the X-ray.

Notice in the diagram below the dramatic changes that occur as a result of snacking after breakfast:

Digestion (Snacking Studies)

Normal Breakfast

2 Hours Later

Results

Person # 1	No snack	Stomach empty in 4-1/2 hours
Person # 2	Ice Cream Cone (2 hours after meal)	Residue in the stomach after 6 hours
Person # 3 (2 hours after meal)	Peanut Butter Sandwich	Residue in the stomach after 9 hours
Person # 4	Pumpkin Pie and glass of milk	Residue in the stomach after 9 hours
Person # 5	Half slice of bread and Butter repeated every 1-1/2 hours with no dinner)	More than half the breakfast in the stomach after 9 hours
Person # 6	Twice in morning and twice in afternoon	13-1/2 hours!!! later more than half the morning meal

Tums for the Tummy!

As an added problem, bacteria in the stomach of the snacker starts fermenting the sugars, producing gas resulting in indigestion. Let's say that they took an "antacid" at this point to help with the indigestion symptoms. This would tend to make the matter worse, because the acids in the stomach help to keep the food sterile. An antacid would interfere with keeping the stomach contents sterile and would interfere with the stomach enzymes that need an acid environment in which to work. If the person had a stomach ulcer and his digestive juices were eating the stomach lining, the antacid may take some of the pain away; however, the only way to correct the indigestion problem at its source would be to discontinue eating between meals.

Let's notice a comment on this topic from one of my favorite health authors: "Eating between meals is not a good practice since it causes retention of food in the stomach longer than is desirable. Fermentation is the result of stagnation of food in the stomach. The irritating products

which accumulate with fermentation are a common cause of gastritis."

"Don't wash your food down with fluids." Water taken with meals cuts down on the production of saliva and discourages chewing, making the length of time food spends in the mouth much shorter. Digestion is thereby hindered. Also, since digestive enzymes both in the mouth and in the stomach and intestines are diluted by beverages taken with meals, digestion is further delayed. The stomach must make more acid to maintain a proper pH. All these factors add to the likelihood of fermentation in the digestive tract, gas formation, and various types of discomfort and poor functioning of digestion and elimination."

"Stagnation in the stomach is one of the commonest causes of ulcers and gastritis. Eating between meals not only increases stomach emptying time, but also confuses the colon so that defecation schedule may be altered, resulting in constipation."

Agatha & Calvin Thrash M.D.

Nutrition for Vegetarians, page 81, 88, 93

Snacking, Disease and the Digestion Connection

Are there any other problems with snacking? There is a whole collection of diseases that have come to be known as "Western diseases" because they are found mostly in the "developed nations." These diseases have one thing in common. The body is getting more calories than it can handle. Some bodies have little trouble with

the extra calories, they simply store them and the body gets fatter and fatter without any other symptoms for a long time. Other bodies may not get fat but they still develop arthritis, diverticulitis, cholecystitis, diabetes, arteriosclerosis, heart attacks, strokes, and cancer. All of these ills could largely be prevented by three simple strategies:

- a) No snacking.
- b) Moderate daily exercise.
- c) Eating unrefined plant foods.

In third world nations, where people eat simple plant foods, get plenty of exercise, and generally do not snack, we do not find

the diseases that characterize the Western world. There are many scientific studies that have documented these facts. The evidence is clear and compelling. Then why don't we get rid of so much cause of sickness and suffering and the high cost of medical care?

Consider our reasons for snacking

- *We snack for solace.* Snacking is poor soul solace. Snacking is a poor comforter, especially when, after years of comforting, it bites you with diabetes or some other Western disease.
- *We snack to reward ourselves.* A snack should not be used to reward good behavior, when it is itself bad behavior from the physiological standpoint.
- We say, "*It is our culture to eat many times a day.*" Snacking is a preventable habit and one that can be changed.

Frequent eating without frequent exercise fosters disease and premature death.

- *Everybody does it!* Yes, it is true that snacking is common. So are obesity, diabetes, hypertension, heart disease and the rest of the Western diseases that we find in industrialized countries. We have a choice to make. We can live fashionably, get fashionable diseases and die fashionably, or we can live differently and avoid common diseases, disabilities, premature senility, and death!

So what should we do?

For some of us all that needs to be known is that snacking is a habit that paves the way for the Western degenerative diseases. We will "choose" the good and avoid the harmful. Others, among us, have to learn the "hard way." Sadly, when we are in the end-stages of one of the Western diseases and we realize that in spite of our expensive medications, the disease is only getting worse, we sometimes become open to changing our habits. Then we are willing to make the effort and persevere in changing our life-styles. Worst still some would rather die than change long-established habits. Which type of person are we? We do not

need to stay what we now are! Fate has *not* woven its web about any person so firmly that there is no possibility of change. For all of us, there is hope! With God "all things are possible," and He will help us as we seek to cooperate with Him.

Q *What do you mean by fasting and how can it help to improve my health? Can it help me with arthritis and digestive problems?*

A We strongly advocate for a weekly 24-36 hour fast as part of our dietary recommendations for optimal health for most people. It will be noted as the last of our

twelve progressive dietary changes found on page 132. The fact that the concept of fasting is totally foreign to most Americans is quite strange when we consider its popularity for most of human history and the central role it plays in virtually all ancient and modern religions. Further, this fact is sad since fasting can often heal conditions like arthritis, digestive diseases and many other concerns that otherwise completely defy known remedies.

Fasting in conjunction with optimal nutrition before and after the fast unleashes the same innate power towards health and well-being that allows an exhausted, individual to go to bed (without eating) and wake up vibrant and full of energy for another 16 hours. Fasting enables the body to repair and rejuvenate its own tissues, by directly providing the conditions for recovery and removing the impediments that curtail our recuperative powers. The fast establishes a unique opportunity, vital for the restoration of health.

The reason many of us are so afraid of fasting and find the mere thought of it so unpleasant is that when we skip even one meal we feel awful. We assume fasting would therefore be very uncomfortable. However those, who exhibit uncomfortable signs during a fast, are in greatest need of a fast. Headaches and other discomforts brought on by not eating are signs that the body has begun to withdraw from and detoxify waste products retained in body tissues. When we delay eating or fast, these tissue stores of toxic waste are mobilized for removal.

Symptoms such as abdominal cramping and headaches, traditionally

thought of as hunger symptoms, are not really symptoms of hunger. These symptoms are experienced only by those eating a diet far too rich and stressful for their own internal controls. These symptoms are signs of withdrawal that indicate healing is beginning when the body has the opportunity to rest from the continual intake of food.

Q *Having gone through the STARTNEW program, I have noticed that my feet and hands are now often quite cool. Should I be concerned?*

A No. Cold hands and feet are fairly common and usually a sign of good health! This change happens when our blood pressure drops (this is a good thing). In this situation, the body conserves blood flow by diverting some of the circulation from our extremities to our torso (chest and abdomen). This causes our extremities to feel relatively cool. This can be improved by increasing our activity level and quantity of water intake. Both of these will increase circulation to our extremities and thereby increase their warmth.

In order to be complete, we should mention other less likely causes, more often found in doctor's offices. Patients seen by doctors will occasionally be tested for conditions such as low thyroid function and B12 deficiency. These can easily be diagnosed with a blood test. Still others will be tested for circulatory diseases like cholesterol-filled arteries or Raynaud's disease (this involves spasms of the artery walls). Both of these cause a decrease in blood flow to the extremities.

However, for our purposes here, this is

almost always a sign of improving health by virtue of START NEW!

Q Last week you discussed the very high salt intake in the American diet and related this to our problems with high blood pressure. I have tried to decrease the salt in my diet yet still have difficulties with my blood pressure. What other changes can I make that might help me get a handle on this disease and also allow me to reduce or eliminate my blood pressure medications?

A It is probably true that excessive salt intake is the primary cause of high blood pressure (also called hypertension) in our country. Yet it is also true that there are other lifestyle factors that greatly contribute to our blood pressure woes.

Before we mention them, your question and interest might allow us to make a comment about high blood pressure that is not commonly understood. While high blood pressure does indeed lead to many serious health problems, like heart failure, stroke, and kidney failure, we do ourselves a disservice when we consider it to be the real problem. High blood pressure itself is not the problem; rather it is just a sign of the problem(s). The real problem in >90% of cases is lifestyle and thus curable (and usually quickly). However, since medications only treat the sign (the high blood pressure) they actually often make the problem worse.

Let's answer your initial question regarding the other causes of high blood pressure and the above thought will begin

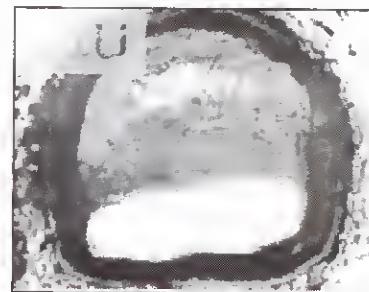
to make sense. Notice the boxes below describing the major causes and the means by which they cause the blood pressure to increase.

<u>Causes</u>	<u>How</u>
Salt	Increase blood volume
Fat/Cholesterol	Narrow vessel channels
Caffeine/Nicotine	Constrict blood vessels
Stress	Constrict blood vessels

Keep in mind that all the cells of our body require nourishment (i.e. oxygen, food, etc.) and that the heart's job is to pump our blood through the arteries to all the cells of our body.

In the case of excessive salt, the body is forced to retain extra water and thus the increased blood volume simply increases the pressure on the artery walls. However, with many of us Americans the excessive saturated fat and cholesterol in our diets is the culprit behind our blood pressures woes.

Notice the narrowed artery channel in the diagram to the right. In this cross-section of an artery, we see the buildup



of cholesterol, which reduces 75% of the channel for blood flow.

In response, the body raises the blood pressure so that adequate blood is still delivered to the cells of our body. Doesn't this make sense? The body must compensate for the narrowed arteries by raising the blood pressure in order to deliver adequate oxygen and nutrients to the tissues.

Universally, doctors treat the elevated blood pressure as if it were a disease, yet the increase in pressure is often simply a response to impairment of blood flow from narrowed blood vessels. Rather than correct the poor circulation, the accepted response is to lower the blood pressure by weakening the heart (beta blockers), weakening the arteries (calcium channel blockers), depleting fluids (diuretics), and/or counteracting hormones (ACE inhibitors).

In other words, we are counteracting the body's own efforts to adjust to the poor circulation. This is why the results of the efforts are so disappointing – for example, treating high blood pressure with the best of intentions does very little to reduce the risk of death from heart disease and all too little to reduce the risk of stroke.

The proper response is to improve our circulation. This would be accomplished by a healthier diet (a plant-based unrefined diet), and the elimination of artery-constricting alcohol, coffee, tea and soda pop. Such a change allows most high blood pressure sufferers to discontinue their medications for treating hypertension and yet obtain an excellent, or at least, an acceptable blood pressure, within a few short days.

Sadly, many studies of people treated with medications for elevated blood pressure show that when the blood pressure is reduced below a certain level, the risk of problems (heart attacks, strokes and deaths) actually increases. Recent studies have confirmed that a blood pressure below 145/85 on medications is associated with an increased risk of heart attacks and strokes. Let's emphasize that this is only

true for those who are taking medication. Off medication, the blood pressure can be much lower and this simply represents good health. Indeed, the healthiest people worldwide have blood pressures all their lives of around 110/60.

The reason that too aggressive a treatment of hypertension with medications causes serious harm is because by artificially lowering the blood pressure the flow of blood to the heart, brain, and all other tissues is impaired. The small blood vessels are the ones most affected. The compromised blood flow deprives the vital organs of oxygen and nutrients, causing dysfunction (like arrhythmias) of heart muscle and brain injury—sometimes resulting in a heart attack or stroke.

Again, as with virtually all chronic lifestyle problems, there is abundant hope for a better future. With just a few simple changes high blood pressure can be conquered!

Q *We read so much today about alternative medicine with its many and varied treatments. Which of these are worth considering and trying?*

A Let's begin answering this question by emphasizing our simple core belief, developed by experience in combination with the study of true science and Bible research, that the eight principles of START NEW contain all the remedies necessary to prevent and heal all possible diseases.

Yet what of the myriad of treatments that fall under the heading of 'Alternative Medicine' (or 'Traditional Medicine' for that manner)? This is a most timely question. How can we determine which are worth trying?

Indeed, we frequently receive questions on a wide range of "therapies" for the various health problems common in our society. Rather than answer them individually (there being hundreds and hundreds), please allow us to expand the foundation around the

seven principles of truth detection (please review from page six). It is our belief that these broad principles can safely guide us in the selection of the proper heaven-sent methods of healing.

"Whose power makes it work?"

Over the past few weeks, we have alluded to the relative impotence of drugs, doctors, surgeons, and hospitals to reverse or cure the major diseases now epidemic in our country. This leads us to consider what is today being called 'Alternative Medicine.' As we consider the field of alternative medicine (or any healing art), we immediately face the obvious question of whether a particular therapy is "safe and effective?" Now this is an important question. None of us really want to try something that is unsafe or ineffective! Yet, there is another question, needful of an answer first, that will truly allow us to accurately answer whether something is really "safe and effective."

Sadly, as we are suffering through the difficulties of illness, we have been led to believe in the motto "if it works, use it!" We often only ask if a method of healing "works?" However, there is another question needful here and that is **"whose power makes it work?"** While this question might seem strange in 21st century America, it is nonetheless true, that there are two powers, divine and demonic, at work in this world! Not surprisingly, the Lord and His (and our) Adversary, the devil, are clearly identified for us in the Scriptures as the opposing forces at work in health and sickness.

This is one of the most important questions we will ever answer. Indeed, the answer we give will to a large degree determine how we respond to sickness as well as many other issues of life. Can the devil cause sickness? As we ponder this possibility, we might suggest that the devil has worked very hard to make this question seem ridiculous to our "modern enlightened minds." Yet the Bible leaves no doubt that the devil can cause illness (consider Luke 13:10-17; Job 2:1-7). If we accept this truth, we are then mindful that he can also remove sickness and restore health at a time and in a manner of his choosing! (see Revelation 13:13,14; 16:14; 19:20). Sadly, many struggle to understand the magnitude of the devil's activity (1 Peter 5:8).

A wise Bible student once stated that "none are in greater danger from the influence of evil spirits than those who, notwithstanding the direct and ample testimony of the Scriptures, deny the existence and agency of the Devil and his angels. So long as we are ignorant of their wiles, they have almost inconceivable advantage; many give heed to their suggestions while they suppose themselves to be following the dictates of their own wisdom.... There is nothing the great deceiver fears so much as that we shall be acquainted with his devices."

If when we are sick, even miserably sick, we will accept anything that provides relief, then the devil can and will use his deceptions to involve us in false healing methods that may, imperceptively, lead us away from our blessed Savior. Sadly, multitudes will be eternally lost on this very point (2 Thessalonians 2:10). We must always ask ourselves, "Can I safely be treated in this manner without jeopardizing either my physical health or my spiritual relationship with the Lord?"

Many treatments have been inspired by the devil and are dangerous for us to utilize. Do they work? Yes, they often seem to work quite well. Yet, they may, ultimately, lead us down the road to death and destruction! As we submit our bodies to any particular therapy, we must be careful to seek forms of therapy that honor God and do not harm His handiwork.

What then is the right treatment? Interestingly, this is rarely difficult to know. Sadly, however, the real problem is that we struggle to do the right thing. Why? Simply because, doing the right thing, requires us to deny the desires of our heart. While we may know right, we enjoy wrong! Indeed, right doing is sometimes difficult and occasionally even painful. It is not always easy to exchange our destructive habits even for those virtually guaranteed to enhance our health, vitality and longevity.

Because of our resistance to doing the right thing, today we are experiencing an explosion of alternative choices that promise an easy way to secure health. While we are sometimes reticent to cooperate with the Lord and obey His laws of health (START NEW), we are too often willing to

do everything and anything else to gain our ever illusive goals. Thus, we now have exposed the primary reason why an ever growing amount of our national economy (16%) is found within the health care field.

"There are many ways of practicing the healing art, but there is only one way that Heaven approves. God's remedies are simple agencies of nature that will not tax or debilitate the system through their powerful properties. Pure air and water, cleanliness, a proper diet, purity of life, and a firm trust in God, are remedies for the want of which thousands are dying," These thoughts will safely guide us.

Q *Your have spoken about the positive features as well as the problems with our modern American medical system including the pharmaceutical industry. Please relate these issues to God's plan of salvation and the Adversary's work to thwart this plan.*

A Thank you for this question which affords us an opportunity to draw attention to the spiritual issues involved in the activities of our every day lives. Remember our comment in the introduction that "we will be endeavoring to give health and disease its rightful place as heaven sent vehicles for understanding the spiritual principles of life." Let's break through the physical right now into the supernatural world where deception is the greatest weapon of the Adversary in the battle for our eternal destiny.

Deception has from the very beginning been a powerful feature of Satan's program. As early as Genesis 3, we read about

his conversation with Eve through the **deceptive medium** of a serpent and an innocent 'appearing' fruit tree. Consider the integral role food, which looked "good, "pleasant," and "desirable," played in this scenario that served to **separate man from his relationship with God**. Interestingly, it is very popular to believe that Satan, today, does not work in this very same manner. He has deceived us about the deception!

In talking about the last days of earth's history, in Mathew 24, the Lord emphasized this very issue by warning us repeatedly "Take heed that **no man deceive you**." Yes,

our adversary may no longer speak through a snake, but he still speaks. Today, he has changed his **medium** from snakes to men, however, as we shall see, food remains the constant!

Well, Bible students are not surprised that our adversary works through deceptions. We have been well warned of this fact in Revelations 12:9. "And the great dragon was cast out, that **old serpent**, called the Devil, and Satan, which **deceiveth the whole world**: he was cast out into the earth, and his angels were cast out with him."

Deception and our Health

In narrowing our discussion to the realm of health, let's look at 2 Thessalonians 2:10-11. In speaking about those who are spiritually lost, Paul gives us the reason for their condition, "...because they received not the love of the truth, that they might be saved. And for this cause God shall send them strong delusion."

What is 'the truth' being referred to in this passage? Yes, it can be thought of as the whole of Bible truth or any single truth within the Scriptures. Is it okay for us to reject any of God's council? Moreover, this passage teaches the amazing truth that delusion (deception) is the end result of rejecting truth. This is supported by John 7:17, which states, "if any man will do his will, he shall know of the doctrine, ..." In other words to love, is to do, and to do is to avoid being deceived!

"...because they received not the love of the truth, that they might be saved. And for this cause God shall send them strong delusion ..."

2 Thessalonians 2:10

For our discussion today, let's consider the Bible's message on food, appetite and health as 'the truth rejected' that ultimately leads to deception and maybe even the forfeiture of salvation.

Before turning to our discussion on food and its power, let's look at one more Scripture in the context of the passages already considered. In Revelation 18:23, we find John speaking of a worldwide deception in the last days, and he says "...

"...for thy merchants were the great men of the earth, for by thy sorceries were all nations deceived. "

Revelation 18:23

sorcery (5331) pharmakeia , ("pharmacy")
meaning medications, chemicals or drugs

"...for thy merchants were the great men of the earth, for by their drugs or chemical concoctions were all nations deceived. "

for thy merchants were the great men of the earth; for by thy sorceries were all nations deceived."

This passage is confusing to our 21st century American minds, as 'sorcery' is a word little used or understood in our society. This difficulty begins to disappear, however, as we consider the original Greek word penned by the apostle John some 1900 years ago. The word translated 'sorceries' by the King James theologians was, in the original Greek, 'pharmakeus,' from which we get the word, pharmacology, or the science of drug medications.

Let's now read this text again with pharmakeus applied to our days. "...for thy merchants were the great men of the earth; for by (their drugs and chemical concoctions) were all nations deceived."

Now let's combine this passage with the previous text from 2 Thessalonians. "...because they received not the love of [the Bible's health message], that they might be saved. And for this cause God shall send them strong delusions [which will be caused by drugs and chemical concoctions from their poor dietary choices]." Wow! Do not rush on before repeating these sentences slowly. Have we fairly rendered the Word?

Q *The Bible record tells us that men lived to nearly 1000 years of age before the time of the flood when the diet prescribed by God was purely vegetarian. Why then did God allow mankind to partake of animal products if the result was to be a shortened life and an increased frequency of disease?*

A Indeed, after the flood, animal products were for the first time (Genesis 9:3)

permitted in man's diet. It was not the original will of the Creator that His creatures should consume one another. Originally, He had given man plants for food (Genesis 1:29; 3:18). Why the change after the flood? The answer is found in two primary and imminently practical considerations.

First, with the Flood, there was the temporary destruction of all plant life. Therefore, with the food supplies in the Ark running out, an emergency arose that God met by giving permission to eat the flesh of animals.

Secondly, this dietary change was a primary factor in man's shortened lifespan; yet, in so doing, it also reduced his record of sinning, intemperance, fatigue, pain, sorrow, and fear. For God saw it best that man should not be permitted to perfect a sophistication that hundreds of years in sin would produce, as he had before the Flood. Moreover, hundreds of years were not necessary for him to indicate his choice for his eternal destiny and to perfect a righteous character.

In all things, God is working for our eternal salvation!

Q *Is cancer contagious?*

A No, cancer is not contagious. Although being infected with certain viruses or bacteria may increase the risk of some types of cancer, no one can "catch" cancer from another person.

Q *What's the bottom line?*

A Scientific research reveals that God's START NEW program reduces the risk for every disease known.

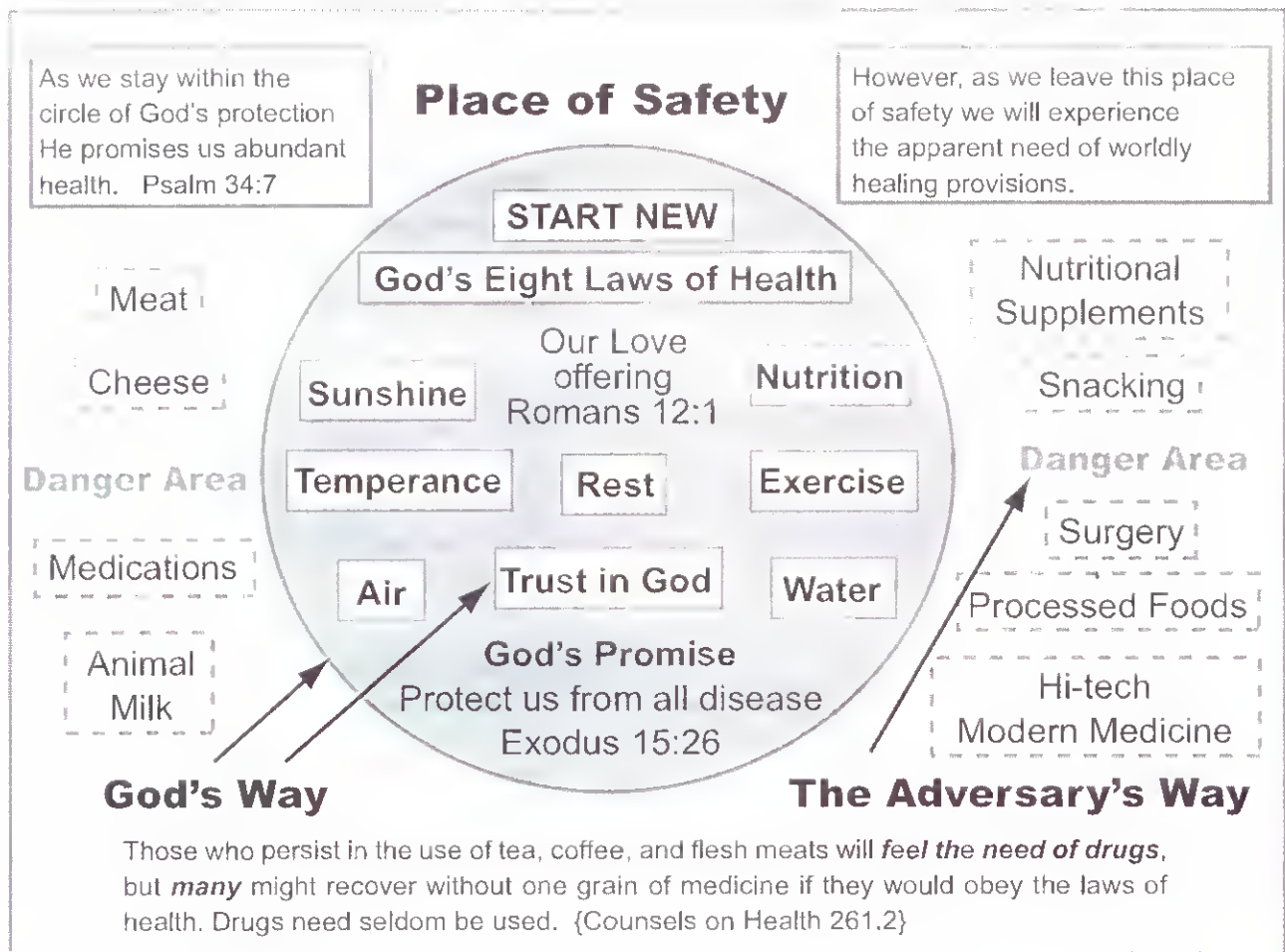
to mankind and is associated with the longest and highest quality life! Yet, with all the recent scientific and medical research gaining attention it is easy to forget that the health principles being examined were established at the very beginning of this world's creation.

In Genesis 1:29, the first book and chapter of the Bible, we read "Behold, I have given you every plant yielding seed which is upon the face of all the earth and every tree with its seed in its fruit, you shall have them for food."

Indeed, the eight laws of health were given to mankind at Creation and again "given" at the time of deliverance from

slavery in Egypt. This is exactly what the Lord is trying to do today. He is working to deliver His children from the slavery of sin and suffering through START NEW.

In Ecclesiastes 7:17, the wise man echoes the words of the Lord heard down through the ages of human existence. "Why should you die before your time?" Indeed, the Lord has provided a means by which we may enjoy many extra high quality years here and now. Even better, He has provided a means by which we may live for eternity with bodies that never fail and with a joy that we can not now imagine.



Advantages of the Two-Meal Plan

1. Skipping the third meal can cut food costs, perhaps by one-third.
2. Skipping the third meal gives an extra 30-90 minutes for that "special" project/activity which needs attention.
3. Skipping the third meal can cut kitchen chores—setting the table, cleaning the kitchen, etc. — plus cutting grocery shopping time, 30-60 minutes per day.
4. The two-meal plan helps regulate body weight. Overweight people usually lose weight, and underweight people improve their metabolic efficiency, and sometimes gain weight.
5. Without the large supper meal to burden the stomach, the mind is alert for evening worship, Christian fellowship, study, and recreation. No more groggy evenings.
6. With an unburdened stomach, we can go to bed sooner, taking advantage of those doubly-blessed pre-midnight hours. "Early to bed, early to rise, makes a man healthy, wealthy, and wise."
7. When the digestive system is at rest, the entire body rests better. Less sleep is needed.
8. Without food in the stomach to draw the blood from the skin, the body can sleep comfortably in a cooler room with fresher air. Less problem with chilly nights.
9. In the morning we awaken with a cleaner mouth, breath, eyes, alert mind, with no heavy "bags" under the eyes. No need for "make-up."
10. The stomach, instead of feeling "all gone" from exhaustion, feels at peace. No "gnawing beast" in the stomach disturbs the sleep and pre-breakfast "quiet time" with God. The body is more energetic, and we can even work comfortably for several hours before breakfast if necessary.
11. When breakfast time comes, the stomach, having been awakened and cleansed with fresh glasses of warm water, is ready for a hearty meal. Breakfast is a tasty delight.
12. We have found that those on the two-meal plan have less temptation to eat in-between meals, and can comfortably wait until mid-afternoon for their second meal. An evening snack sabotages a hearty breakfast.
13. Those on two meals a day find it easier to fast a meal or two, and irregularities of any kind are more tolerable. Less possibility of faintness, jitters, and irritability.
14. A clean, rested stomach is a prerequisite to having clean blood. Clean blood is

essential for efficient phagocytosis of germs, toxins, etc. Those with allergies, headaches, sinus problems, etc. are especially blessed.

15. With the stomach enjoying longer periods of rest, the danger of ulcers is lessened. Food activates the digestive secretions, thus aggravating ulcers. Those who have been eating frequently, and developed ulcers, find relief by drinking water to put the excited stomach at rest.
16. While we generally recommend a third small meal during pregnancy, pregnant women who enjoy the two-meal plan have less trouble with "morning sickness." Nursing mothers on two meals have greater milk supply. Some who have switched temporarily to three meals have had their milk supply stop

until they fasted and resumed the two-meal plan.

17. It takes several weeks for the body to adjust to the two-meal plan. Therefore, please don't try it until you are committed to at least a month's experiment. In the autumn, as the days grow shorter, the transition is easier than at other seasons of the year. Go to bed early!
18. A study done in 1994 in Australia revealed a marked decrease in several diseases in persons who took a two-meal plan approximately six hours apart, fasting during the remaining eight hours. The researchers mentioned asthma, cancer, allergies and arthritis, all currently found in epidemic frequency in America.

Scientific Proofs and Inspired Thoughts

1. "Incidence of lung and colorectal cancer is lower in vegetarians than in non-vegetarians."
Cancer incidence among California Seventh-day Adventists, 1976-1982
American Journal of Clinical Nutrition, 1994; 59 (supp.): 1136S-142S
2. "Western vegetarians have significantly lower average serum total cholesterol concentrations, body mass index, and blood pressure, all well-established diet-related risk factors for coronary heart disease. Of particular interest is that the lower average serum total cholesterol concentration would be expected to result in an approximately 25% reduction in mortality from coronary heart disease among vegetarians compared with non-vegetarians."
Nutrition, May 2003, Volume 19, Issue 3, 285-289
3. "Total serum cholesterol and low-density lipoprotein cholesterol levels are usually lower in vegetarians, but high-density lipoprotein cholesterol and triglyceride levels vary depending on the type of vegetarian diet followed."
Journal of the American Dietetic Association, November 1997, 97(1) citing the American Journal of Clinical Nutrition, 1994; 59: 103-109

4. "Vegetarian diets offer disease protection benefits because of their lower saturated fat, cholesterol, and animal protein content and often higher concentration of folate (which reduces serum homocysteine levels), antioxidants such as vitamin C and E, carotenoids, and phytochemicals."
Journal of the American Dietetic Association, 1995; 95: 180-189
5. "Eating a diet rich in plant foods, in the form of fruits, vegetables, and whole-grain cereals, probably remains the best option for reducing the risk of colon cancer, and for more general health protection."
The Lancet. May 3, 2003. Volume 361, p.1448
6. "Using a macrobiotic diet emphasizing whole grains, vegetables, and legumes while avoiding dairy products and most meats, nine men with prostate cancer had an average survival of 228 months, compared to 72 months for a matched group of men using no special diet."
Journal of the American College of Nutrition, 1993; 12:209-26
7. "Well-planned vegan diets are appropriate for all stages of the life cycle, including during pregnancy and lactation. Appropriately planned vegan and lacto-ovo-vegetarian diets satisfy nutrient needs of infants, children, and adolescents and promote normal growth."
Journal of the American Dietetic Association, November 1997, 97(1) citing the *American Journal of Clinical Nutrition*, 1994; 59 (suppl): 1176S-1181S.
8. "Vegan diets can meet the nutrient and energy needs of pregnant women. Birth weights of infants born to well nourished vegetarian women have been shown to be similar to birth-weight norms and to birth weights of infants of non-vegetarians."
Pediatrics, 1989: 84
9. "Certified death rates from coronary heart disease (CHD) are positively correlated country-by-country with milk consumption, particularly with that of the non-fat portion of milk."
International Journal of Cardiology, February 2003, Vol 87, Issue 2/3
10. "Vegetarians tend to have a lower incidence of hypertension than non-vegetarians."
Journal of the American Dietetic Association, November 1997. 97(1) citing the *American Journal of Clinical Nutrition*, 1994; 59 (suppl): 1130-1135
11. "At least 50% of all children in the United States are allergic to milk, many undiagnosed. Dairy products are the leading cause of food allergy, often unrevealed by constipation, diarrhea, and fatigue. Many cases of asthma and sinus infections are reported to be relieved and even eliminated by cutting out dairy."
Frank Oski, M.D., Chief of Pediatrics at Johns Hopkins Medical School
Natural Health, July, 1994
12. "Dietary fat during childhood may be more life-threatening than was originally suspected . . . Overweight children are usually the victims of the dietary habits of the adult members of the family . . . Reducing dietary fat to levels necessary to the control of cholesterol cannot be achieved if a child drinks whole milk or eats cheese."
Charles Attwood, M.D.,
Dr. Attwood's Low-Fat Prescription for Kids

13. "The beef industry has contributed to more American deaths than all the wars of this century, all natural disasters, and all automobile accidents combined. If beef is your idea of 'real food for real people,' you'd better live real close to a real good hospital."
Neal Barnard, M.D., Physicians Committee for Responsible Medicine
14. "With the exception of tobacco consumption, diet is probably the most important factor in the etiology of human cancer."
Toxicology, December 2002, Volume 181-182
15. "In a controlled trial, 21 strict vegetarians were studied prospectively for eight weeks; a two-week control period of the usual vegetarian diet was followed by four weeks, during which 250 g of beef was added isocalorically to the daily vegetarian diet and then by two weeks of the control diet. Plasma total cholesterol rose significantly by 19% at the end of the meat eating period."
Journal of the American Medical Association, 1981 August 7; 246(6):640
16. "Milk and milk products gave the highest correlation coefficient to heart disease, while sugar, animal proteins and animal fats came in second, third, and fourth, respectively."
Medical Hypothesis, 7:907-918, 1981
17. "Mortality from coronary artery disease is lower in vegetarians than in non vegetarians."
British Medical Journal, 1994; 308
18. "Type 2 diabetes mellitus is less likely to be a cause of death in vegetarians than non vegetarians."
American Journal of Clinical Nutrition, 1988; 48(suppl)
19. "How good it is to be well-fed, healthy, and kind all at the same time."
Henry J. Heimlich, M.D.
20. "Vegetarians often have lower mortality rates from several chronic degenerative diseases than do non vegetarians."
British Medical Journal, 1996, 313
21. "A vegetarian diet can prevent 97% of coronary occlusions."
Journal of the American Medical Association, 179: 134-135, 1961
22. "Vegetarian diets have been successful in arresting coronary artery disease."
American Journal of Epidemiology, 1995: 142
23. "Breast cancer rates are lower in populations that consume plant based diets."
American Cancer Society, Cancer Facts and Figures, 1994
24. "A vegetarian diet does reduce the occurrence of diabetes."
American Journal of Public Health, 75: 507-512, 1985
25. "Scientists at the Royal Perth Hospital in Australia found that people with high blood pressure could indeed reduce it, on a vegetarian diet. They wrote: 'If the usual aim of treatment of mild hypertensives is to reduce systolic blood pressure to below 140mmHg, then 30 per cent of those eating a meat-free diet achieved this criteria compared with only 8 per cent on their usual diet.'
Clinical and Experimental Pharmacology and Physiology, 1985, 12, pages 263-6

26. "A diet that is high in animal protein- as opposed to vegetable proteins- particularly increases the excretion of calcium."
Journal of Clinical Endocrinological Metabolism, Jan 1988, 66 (1), pp140-6
27. "Since the 1920s scientists have known that diets that are high in protein cause calcium to be lost through the urine."
Journal of Nutrition, 1981, 111, pp 552-3
28. "Diets low in saturated fats, high in omega-3 fatty acids and high in fruits, vegetables, nuts, and whole grains are the best for your heart."
Journal of the American Medical Association, Nov. 27, 2002
29. "High fruit and vegetable intake reduces stroke risk."
Journal of the American Medical Association, 282:1233-39, Oct. 5, 1999
30. "Women eating the highest amounts of red meats, sweets, french fries and refined grains had 1.5 times the risk of colon cancer of women who ate more fruits, vegetables, fish and whole grains."
Archives of Internal Medicine, Volume 4, Number 36; February 14, 2003
31. "When I was 88 years old, I gave up meat entirely and switched to a plant-foods diet following a slight stroke. During the following months, I not only lost 50 pounds but gained strength in my legs and picked up stamina. Now, at age 93, I'm on the same plant based diet, and I still don't eat any meat or dairy products. I either swim, walk, or paddle a canoe daily and I feel the best I've felt since my heart problems began."
Dr. Benjamin Spock, Nutrition Advocate, 1996
32. "A high ratio of dietary animal to vegetable protein increases the rate of bone loss and the risk of fracture in postmenopausal women."
American Journal of Clinical Nutrition, 2001 Jan; 73(1): 118-22
33. "An association was found between consumption of red meat, particularly processed meat, and risk of colorectal cancer, which corresponds with current advice to limit intakes of red meat and meat products."
Cancer Epidemiology, Biomarkers and Prevention, 2001; 10: 439-446
34. "Vegetarian diets low in fat or saturated fat have been used successfully as part of comprehensive health programs to reverse severe coronary artery disease."
Journal of the American Medical Association, 1995; 274
35. "Plant sources of protein alone can provide adequate amounts of essential amino acids if a variety of plant foods are consumed and energy needs are met. Research suggests that complementary proteins do not need to be consumed at the same time and that consumption of various sources of amino acids over the course of the day should ensure adequate nitrogen retention and use in healthy persons."
Journal of the American Dietetic Association, November 1997, 97(1) citing the *American Journal of Clinical Nutrition*, 1994; 59(suppl 5): 1203-1212
36. "Swedish researchers who enrolled 66 arthritis patients in a one-year study assigned 38 to a gluten-free, vegan diet and 28 to a non-vegan diet (control group). Forty percent of people in the vegan group

- improved compared to just one person in the control group.”
Rheumatology. 2001; 40:1175-9
37. “One study tested a mostly raw vegan diet in 30 patients with fibromyalgia, a syndrome of chronic fatigue, pain, poor sleep, depression, and anxiety. After several months on the diet, 19 participants showed signs of improvement in range of motion, flexibility, and other measures.”
BMC Complementary Alternative Medicine. 2001; 1:7
 38. “Ten healthy participants were asked to follow an Atkins-style, carbohydrate-restricted diet for two weeks and then follow a moderately carbohydrate-restricted diet for four more weeks under close monitoring. It turned out that the meaty diets increased their calcium loss by 55 percent. Researchers concluded that a high-protein diet presents a marked acid load to the kidneys, increase the risk for kidney stones, and may increase the risk for bone loss.”
American Journal of Kidney Disease. 2002; 2:265-74
 39. “Studies indicate that vegetarians often have lower morbidity and mortality rates from several chronic degenerative diseases than do non-vegetarians. Although non-dietary factors, including physical activity and abstinence from smoking and alcohol, may play a role, diet is clearly a contributing factor.”
British Medical Journal. 1996; 313:775-779
 40. “This study showed that patients with moderate-to-severe rheumatoid arthritis (RA), who switch to a low-fat, vegan diet can experience significant reductions in RA symptoms.”
Journal of Alternative and Complementary Medicine. February, 2002, 8; 1
 41. “U.S. children who are overweight or obese. 25%”
Archives of Pediatric and Adolescent Medicine. 1995, 149:1085-91
 42. “U.S. children who eat the recommended levels of fruits, vegetables, and grains: 1%”
Pediatrics. Sept 1997, pp 323-29
 43. “Osteoporosis is caused by a number of things, one of the most important being too much dietary protein.”
Science. 1986: 233(4763)
 44. “40% of the world’s cancer cases could be prevented through the adoption of diets rich in grains, fruit and vegetables.”
American Institute for Cancer Research: World Cancer Fund 10/16/97
 45. “Lower breast cancer rates have not been observed in Western vegetarians, but cross-cultural data indicate that breast cancer rates are lower in populations that consume plant-based diets.”
American Journal of Clinical Nutrition. 1990; 51:798-803
 46. “A high-fat, animal-based diet is the single most significant cause of death from heart disease.”
Nutrition in the '90s: Current Controversies and Analysis, ed.
Frank Kotsonis and Maureen A. Mackey
 47. “Likelihood of a vegetarian reaching the age of 80 compared to a non-vegetarian after adjusting for smoking, 1.8 times greater.”
British Medical Journal. 1996; 313:775-79

48. "Vegetarian diets decrease the risk of cancer."
World Cancer Research Fund and American Institute for Cancer. "Food, Nutrition and the Prevention of Cancer: A Global Perspective," 1997. 456-57
49. "Cow's milk has become a point of controversy among doctors and nutritionists. There was a time when it was considered very desirable, but research has forced us to rethink this recommendation . . . dairy products contribute to a surprising number of health problems."
Benjamin Spock, M.D., Dr. Spock's Baby and Child Care. 7th edition
50. "Pancreatic cancer occurs much more frequently in countries where fat consumption and/or animal product consumption is high."
American Journal of Epidemiology. 1990; 132:423-431
51. "Those men who are prostate-cancer patients consume a diet higher in fat than those who do not have prostate cancer. When animal product consumption is compared to the rates of death, it is found that the consumption of meat and dairy products correlate very closely with the death rate."
Cancer, 1989; 64:598-604
52. "Intervention programs targeting children's dietary fat behaviors should include teaching skills that enable children to ask for low-fat foods . . . These foods should be made available in the home to encourage children to practice low-fat dietary behaviors."
Journal of the American Dietetic Association. 2002; 102:1773-1778
53. "Cancer odds ratios for the highest percentiles of red meat intake (7 or more times per week) compared with the lowest (3 or fewer times per week) were 1.6 for stomach, 1.9 for colon, 1.7 for rectal, 1.6 for pancreatic, 1.6 for bladder, 1.2 for breast, 1.5 for endometrial and 1.3 for ovarian cancer."
International Journal of Cancer. May 1, 2000; 86:425-428
54. "A causal relationship between red meat consumption and cancer is supported by several large studies conducted in the U.S. Specifically, women with the highest level of meat consumption had double the rate of breast cancer compared to those who consumed small amounts of meat."
Epidemiology. 5:4 (1994), 391
55. "Average I.Q. of U.S. children: 97"
Los Angeles Times, Feb 6, 1993
56. "Average I.Q. of vegetarian children: 116"
Journal of the American Dietetic Association, 1980; 76:142-47
57. "We assessed the effect of a diet high in leafy and green vegetables, fruit, and nuts on serum lipid risk factors for cardiovascular disease. After 2 weeks on the vegetable diet, lipid risk factors for cardiovascular disease were significantly reduced. On the vegetable compared with the control diet, the reduction in total serum cholesterol was 34% to 49% greater than would be predicted by differences in dietary fat and cholesterol. A diet consisting largely of low-calorie vegetables and fruit and nuts markedly reduced lipid risk factors for cardiovascular disease."
Metabolism, 1997 May; 46(5):530-7

58. "Populations of vegetarians living in affluent countries appear to enjoy unusually good health, characterized by low rates of cancer, cardiovascular disease, and total mortality." *American Journal of Clinical Nutrition*, 1999 Sep; 70 (3 Suppl): 434S-438S
59. "It is found that, given a constant calcium intake, a twofold increase in dietary protein high in sulfur amino acids (such as that found in animal products) produces a 50% increase in urinary calcium loss. In contrast, a diet rich in soy protein does not promote calcium loss." *American Journal of Clinical Nutrition*, 48, 1988
60. "The matched subjects who ate meat (including poultry and fish) were more than twice as likely to become demented as their vegetarian counterparts." *Neuroepidemiology*, 1993; 12(1): 28-36
61. "High-vegetable fiber intakes reduce risk factors for cardiovascular disease and possibly colon cancer." *Metabolism*, 2001 Apr; 50(4):494-503
62. "Type 2 diabetes mellitus is much less likely to be a cause of death in vegetarians than non-vegetarians, perhaps because of their higher intake of complex carbohydrates and lower body mass." *American Journal of Clinical Nutrition*, 1988; 48(supplement):712-738
63. "Plasma homocysteine levels have been directly associated with cardiac disease risk. We report our observations of homocysteine levels in 40 self selected subjects who participated in a vegan diet-based lifestyle program. Subjects' mean homocysteine levels fell 13%." *Preventive Medicine*, 2000 Mar, 30(3):225-233
64. "Fecal sulfide concentrations were significantly related to meat intake. Dietary protein from meat is an important substrate for sulfide generation by bacteria in the human large intestine." *American Journal of Clinical Nutrition*, 2000 Dec, 72(6):1488-94
65. "We conclude that grilled red meat intake is a risk factor for pancreatic cancer and that method of meat preparation in addition to total intake is important in assessing the effects of meat consumption in epidemiologic studies." *Mutation Research*, September 2002, Volume 506-507
66. "Vegans tend to have low serum lipids, lean physiques, shorter stature, later puberty, and decreased risk for certain prominent 'Western' cancers; a vegan diet has documented clinical efficacy in rheumatoid arthritis. Low-fat vegan diets may be especially protective in regard to cancers linked to insulin resistance—namely, breast and colon cancer—as well as prostate cancer; conversely, the high IGF-I activity associated with heavy ingestion of animal products may be largely responsible for the epidemic of 'Western' cancers in wealthy societies. Increased phytochemical intake is also likely to contribute to the reduction of cancer risk in vegans." *Medical Hypotheses*, 1999 Dec; 53(6): 459-85
67. "Nine studies of childhood brain tumors and maternal diet during pregnancy have focused on foods. An association between frequent consumption of cured meat by

- pregnant women and increased risk is a consistent finding in most of the studies." *International Journal of Cancer, Suppl.* 1998; 11:23-5
68. "The administration of subtherapeutic doses of antibiotics to livestock introduces selective pressures that may lead to the emergence and dissemination of resistant bacteria. The present findings clearly demonstrate that antibiotic-resistant bacteria in beef and milk pose a serious problem." *Journal of Food Protein*. 1999 June, 62:6
 69. "The lifetime risk of ischemic heart disease (IHD) was reduced by approximately 31% in those who consumed nuts frequently and by 37% in male vegetarians compared with non-vegetarians. Cancers of the colon and prostate were significantly more likely in non-vegetarians, and frequently beef consumers also had higher risk of bladder cancer. Intake of legumes was negatively associated with risk of colon cancer in non-vegetarians and risk of pancreatic cancer. Higher consumption of all fruit or dried fruit was associated with lower risks of lung, prostate, and pancreatic cancers." *American Journal of Clinical Nutrition*, 1999 Sep; 70(3 Suppl): 532S-538S
 70. "Oxidative damage is thought to represent one of the mechanisms leading to chronic diseases such as atherosclerosis and cancer. Many studies suggest that a link exists between fruit and vegetables in the diet or the amounts of plasma antioxidant vitamins and risk of death from cancer or coronary heart diseases." *European Journal of Cancer Prevention*, 1997 Mar; 6 Suppl 1:S15
 71. "Studies have suggested that bovine serum albumin is the milk protein responsible for the onset of diabetes . . . Patients with insulin-dependent diabetes mellitus produce antibodies to cow milk proteins that participate in the development of islet dysfunction . . . Taken as a whole, our findings suggest that an active response in patients with IDDM (to the bovine protein) is a feature of the autoimmune response." *New England Journal of Medicine*, July 30, 1992
 72. "Many foods, particularly plant foods, contain substances that may have health promoting properties." *British Medical Bulletin*. 2000; 56(1):18-33
 73. "Analysis of study data showed that vegans had lower total and LDL cholesterol concentrations than did meat eaters." *American Journal of Clinical Nutrition*. 1999 Sep; 70(3 Suppl): 525S-531S
 74. "Vegetarians have a lower risk of dying from ischemic heart disease than non-vegetarians." *Public Health Nutrition*, 1998 Mar; 1(1):33-41
 75. "Food, particularly dairy products, meat, and fish, has been identified as the primary immediate source of intake of polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), and polychlorinated biphenyls (PCBs) for the general population. In addition to the meat, dairy, and fish samples, a vegan (all vegetable, fruit and grain, no animal product) diet, was simulated; this showed the lowest level of dioxins." *Chemosphere*, 1997 Mar-Apr; 34(5-7):1437-47

76. "The majority of toxic dioxin is and (or) has been derived from industrial chlorination processes, incineration of municipal waste and production of certain herbicides. The lipophilic nature of dioxins results in higher concentrations in the fat of animal and fish products, and their excretion via milk secretion in dairy cattle may result in relatively high concentrations of dioxin contamination in high-fat dairy products." *Journal of Animal Science*, 1998 Jan, 76:1
77. "Very high protein intake is known to encourage urinary calcium losses and has been linked to increased fracture risk." *Calcification Tissue International*, 1992; 50:14-18
78. "Diets that are rich in plant-derived foods can promote longevity." *Journal of Nutrition*, 2003 Jan; 133(1):199-204
79. "Significant alteration in the intestinal flora was observed when the patients changed from omnivorous to vegan diet. The fecal flora from patients with HI and LI differed significantly from each other at 1 and 13 months. This finding of an association between intestinal flora and disease activity may have implications for our understanding of how diet can affect rheumatoid arthritis." *British Journal of Rheumatology*, 1994 Jul;33(7):638-43
80. "It is the position of The American Dietetic Association (ADA) that appropriately planned vegetarian diets are healthful, are nutritionally adequate, and provide health benefits in the prevention and treatment of certain diseases." *Journal of the American Dietetic Association*, November 1997, 97(1)
81. "Many studies have tried to identify the one, single factor which makes the vegetarian diet beneficial for blood pressure, but the evidence so far shows that neither polyunsaturated fat, saturated fat, cholesterol, potassium, magnesium, sodium, or total protein intake are independently responsible for this effect. It is the totality of the vegetarian diet that is beneficial." *Canadian Journal of Physiology and Pharmacology*, Jun 1986, 64 (6)
82. "High protein diets impair mental functioning." *International Journal of Obesity, Related Metabolic Disorders*, 1995; 19:811
83. "As modern young Japanese have adopted our ways of eating high amounts of fatty foods and more animal products, their age of onset of menses has gradually fallen over the last 50 years from 16 to 12.5 years." *Preventive Medicine*, 1978; 7:205-17
84. "Researchers followed 384 men with prostate cancer over a five-year period . . . those who consumed the most saturated fat—the kind particularly prevalent in meats and dairy products—had three times the risk of dying from the disease, compared to those with the lowest saturated fat intake." *European Journal of Urology*, 1999; 388:91
85. "Evidence strongly suggests that a high intake of plant-based foods, and a low intake of animal products contributes to the excellent health of Mediterranean populations. The high consumption of red meat in Western diets is associated with increased risks of heart disease, some cancers, and urinary calcium losses likely to contribute to osteoporosis." *American Journal of Clinical Nutrition*, 1995; 61, 1416

86. "Cancer induction can be decreased by avoiding the formation of carcinogens, reducing their metabolic activation, or increasing their detoxification. Excessive dietary salt, and heterocyclic arylamines formed in cooking of meats or fish, and high intake of 40% of calories in fats are health risks, but vegetables, fruits, tea, soy products, and fibers are protective." *Biofactors*, 2000, Vol 12, p. 73
87. "A diet enriched with fruit, vegetables, nuts, whole grains and mustard or soy bean oil is associated with a pronounced decline in coronary artery disease morbidity and mortality. The long-term benefits may be even more substantial." *The Lancet*, 2002; 360:1455-1461
88. "I don't understand why asking people to eat a well-balanced vegetarian diet is considered drastic, while it is medically conservative to cut people open or put them on powerful cholesterol-lowering drugs for the rest of their lives." *Dean Ornish, M.D.*
89. "Mortality rates are similar or lower for vegetarians than for nonvegetarians. Data are strong that vegetarians are at lesser risk for obesity, atonic constipation, lung cancer, and alcoholism. Evidence is good that risks for hypertension, coronary artery disease, type II diabetes, and gallstones are lower." *American Journal of Clinical Nutrition*, 1988 Sep; 48 (3 Suppl):712-38
90. "84 prostate cancer men who were able to defer treatment because of a careful watch on their prostate-specific antigen (PSA) participated in the study. Half the men were assigned to usual care (control group) and the remaining half to a low-fat, vegan diet, along with regular exercise and stress management. In the control group, the PSA levels rose over the three-month study period, and 7 required additional treatment. But in the 42 assigned to the vegan diet and lifestyle intervention, the average PSA level dropped from 6.3 to 5.8, and none required further treatment." *Urology*, 2001; 57 (4 Suppl 1):200-1
91. "Scientific data suggest positive relationships between a vegetarian diet and reduced risk for several chronic degenerative diseases and conditions, including obesity, coronary artery disease, hypertension, diabetes mellitus, and some types of cancer." *Journal of the American Dietetic Association*, November 1997 97(1)
92. "In reality, cow's milk, especially processed cow's milk, has been linked to a variety of health problems, including mucous production, hemoglobin loss, childhood diabetes, heart disease, atherosclerosis, arthritis, kidney stones, mood swings, depression, irritability, and allergies." *Townsend Medical Letter*, May 1995; Julie Klotter, MD
93. "Vegetarian diets offer disease protection benefits because higher concentration of antioxidants such as vitamins C and E, carotenoids, and phytochemicals." *American Journal of Clinical Nutrition*, 1996; 63 (suppl)
94. "Some plant proteins may increase survival rates and decrease proteinuria, glomerular filtration rate, renal blood flow, and histologic renal damage compared with a non vegetarian diet." *Clinical Nutrition*, 1995; 10

95. "Tufts University researchers interviewed more than 900 men and women aged 69 to 93 about their diets and measured their bone density at several skeletal sites. Men who consumed the most fruit, vegetables and cereal had denser bones and women who ate a great deal of candy had the lowest bone mineral density."
American Journal of Clinical Nutrition, 2002; 76:245-52
96. "Vegetarians tend to have a lower incidence of hypertension than non-vegetarians. This effect appears to be independent of both body weight and sodium intake."
American Journal of Clinical Nutrition, 1994; 59 (supplement): 1130-1135
97. "Evidence suggests that most of the chronic degenerative diseases can be reversed or at least suspended from further development, by consuming a plant-based diet. This diet has a comprehensive ability to control the expression of the genes that predispose to many diseases such as heart disease, cancer, diabetes, obesity, childhood allergies. The beneficial effects of consuming a plant-based diet can only be fully appreciated and demonstrated when it is understood that nutrients work in concert."
T. Colin Campbell, Ph.D. Cornell University, "The China Study"
98. "The association between vegetarianism and blood pressure was studied in relation to obesity, sex, and aspects of lifestyle. There is an additional blood pressure reducing effect associated with a vegetarian diet."
Clinical Experimental Pharmacology and Physiology, May 1982, 327-30
99. "Every 12 minutes someone dies from breast cancer, Yet women who eat as few as two servings of vegetables per day reduce their breast cancer risk by 30%."
Annals of the New York Academy of Sciences, 768 (Sept. 30, 1995): 1-11
100. "A lipid-lowering portfolio containing vegetable proteins, especially soy, plant sterols and high fiber intake combined with low saturated and trans fatty acids and cholesterol, would go a long way to reducing serum lipids and coronary heart disease risk seen in the modern Western diet."
Asia Pacific Journal of Clinical Nutrition, October 2002, 93
101. "In addition to the health advantages, other considerations that may lead a person to adopt a vegetarian diet pattern include concern for the environment, ecology, and world hunger issues. Vegetarians also cite economic reasons, ethical consideration, and religious beliefs."
Journal of the American Dietetic Association, November 1997; 97
102. "With guidance in meal planning, vegetarian diets are appropriate and healthful choices for adolescents. Vegetarian diets can also meet the needs of competitive athletes. Protein needs may be elevated because training increases amino acid metabolism, but vegetarian diets that meet energy needs and include good sources of protein (e.g., soy foods, legumes) can provide adequate protein without use of special foods or supplements. For adolescent athletes, special attention should be given to meeting energy, protein, and iron needs. Amenorrhea may be more common among

vegetarian than non-vegetarian athletes, although not all research supports this finding."

Journal of the American Dietetic Association, November 1997, 97(1) citing the *American Journal of Clinical Nutrition*, 1991; 54:520-525, and *The Lancet*, 1984; 1,1474-1475

103. "Consuming fruit and vegetables was associated with a 27% lower stroke incidence, a 42% lower stroke mortality, a 24% lower ischemic heart disease mortality, a 27% lower cardiovascular disease mortality, and a 15% lower all-cause mortality. There is an inverse association of fruit and vegetable intake with the risk of cardiovascular disease and all-cause mortality in the general US population."
American Journal of Clinical Nutrition, 2002 July; 76(1): 93-9
104. "A diet characterized by a frequent consumption of vegetables, fruit, whole-grain cereals, and legumes with some nuts and seeds represents the optimal diet for good health."
"Phytochemicals to Protect Our Health," a paper published by Vegetarian Nutrition, a dietetic practice group of the American Dietetic Association, 1998.
105. "It is remarkable that obese patients who have failed to lose weight when taking food several times a day can lose weight when their meals are reduced to two a day though the total prescribed calories remain the same."
D.A. Seaton and L.J.P. Duncan. "Treatment of 'refractory obesity' with a diet of two meals per day." *The Lancet*, September 19, 1964, p. 613

106. "The National Cancer Institute has identified about three dozen plant foods that possess significant cancer-protective properties, including garlic, onions, soybeans, ginger, licorice root, the umbelliferous vegetables (including carrots, celery, cilantro, parsley), flax seed, citrus, turmeric, cruciferous vegetables (broccoli, brussels sprouts, cabbage and cauliflower), tomatoes, peppers, brown rice, oats, whole wheat, herbs of the mint family (rosemary, thyme, oregano, sage, basil), cucumber, cantaloupe and berries. Scientists have identified a variety of cancer-protective phytochemicals in these foods."
"Phytochemicals to Protect Our Health," a paper published by Vegetarian Nutrition, a dietetic practice group of the American Dietetic Association, 1998.
107. "Citrus, in addition to its ample supply of vitamin C, folic acid, potassium and pectin, contains a host of active phytochemicals that also protect our health. In fact, there are over 170 phytochemicals in an orange. There are over 60 flavanoids in citrus; their range of properties includes anti-inflammatory and antitumor activity, inhibition of blood clots and strong antioxidant activity."
Winston Craig and Leslie Beck, "Phytochemicals: Health Protective Effects," *Canadian Journal of Dietetic Practice and Research* 60, No. 2 (1999): 80.
108. Beef protein costs more than soybean protein by a comparison factor of forty to one.
Phillip L. White, ScD. *Let's Talk About Food*, *Today's Health*, 45:14, March, 1967

109. A high meat diet stimulates a rapid rate of growth, predisposing to a shorter lifespan. *Rapid Growth, Short Life, Journal of the American Medical Association* 171(4):461, September 26, 1969
110. On man's original diet of fruit, nuts, legumes, and probably fruiting vegetables, the average recorded lifespan was 912 years. *Genesis* 5:3-32
111. Our diets have changed radically within the last 50 years, with very great and often harmful effects on health. These dietary changes represent as great a threat to public health as smoking. Too much fat, too much sugar or salt . . . are linked directly to heart disease, cancer, obesity, and stroke, among other killer diseases. . . Six of the ten leading causes of death in the United States have been linked to our diet. . . In the early 1900's, almost 40 percent of our caloric intake came from fruit, vegetables, and grain(s). . . Today . . . a little more than 20 percent of calories come from these sources. *Government Report on Nutrition, PHASDA Facts, Third Quarter, 1977, page 3*
112. Protein is a principal weapon used to attack vegetarian diets; but it should be recognized that the protein requirement of a 150-pound man may be satisfied with the daily ingestion of only about 30 grams of protein (one tablespoon holds about 15 grams), or the protein in about 4 slices of whole wheat bread. *O. L. Kline Ph.D. Protein and Amino Acid Additions to Foods, American Journal of Public Health* 50:1890-1894, December, 1960
113. Even dogs, with their high metabolism, don't need much protein. In *Time* magazine, Barbara Woodhouse, the famous dog trainer in England, said modern dogs eat too much protein. Dog food is advertised at 20-27% protein, which Ms. Woodhouse says makes dogs hyperactive and schizophrenic. She says they need no more than 14% protein. *Gerald Clarke. . . And Barking Up Another Tree, Time* 118 (23):80, December 7, 1981
114. All natural foods contain all the essential amino acids in greater or lesser quantities. *Unusual Facts about Plant Proteins San Scripts* 6(6), November-December, 1972
115. In physical testing, the endurance of vegetarians is greater than that of meat-eating individuals. *Endurance of Vegetarians Journal of American Medical Association* 36:1253
116. The liver apparently functions in a different gear for vegetarians. According to a study done in the United Kingdom vegetarians metabolize certain drugs more slowly than do non-vegetarians. This fact may explain why vegetarians rarely become drug addicts, use alcohol, or smoke. *Drug Oxidation in Asian Vegetarians, The Lancet*; 2:151, July 19, 1980
117. Persons who eat a high fiber, vegetarian diet tend to excrete fat at higher levels indicating that fat is being bound by the fiber and carried out of the body. Therefore less fat is absorbed from the food. This may explain the lower body weight of many vegetarians, as well as their low blood fats.

Fat Malabsorption is Associated with High-Fiber Diet

Internal Medicine News 12(16):29,
September 1, 1979

High Level of Fat Excretion Seen with Vegetarian Diets

Family Practice News, 9(17):15,
September 1, 1979

118. A diet high in fruits and vegetables appears to protect against the production of kidney stones.

G. Alan Rose & E.J. Westbury.

The Influence of Calcium Content of Water, Intake of Vegetables and Fruit and Of Other Food Factors Upon the Incidence of Renal Calculi.

Urological Research 3:61-66, 1975

119. Eating excessively of meat is believed to be a major cause of renal stones.

Eating Too Much Meat Considered Major Cause of Renal Stones

Internal Medicine News 12(9):1, 38, May 1, 1979

120. The number of white blood cells customarily found in the blood is higher in smokers, more notably in those who inhale (about 30% higher).

F. Corre. et. al., *Smoking and Leucocyte Counts*

The Lancet 2:632-634, September 18, 1971

121. Dr. Kelley J. Donham, a veterinarian from the Institute of Agricultural Medicine of the University of Iowa, has found that more cases of acute lymphocytic leukemia, the most common type of leukemia in children, occurs in the most rural parts of the state where dairy cattle are most numerous. Further, the leukemia in the humans

parallels lymphosarcoma (a cancerous condition) in cattle. A virus that can be transmitted from cow to cow and cow to humans is the cause of the disease. In those counties having the most cases of lymphosarcoma in the cattle there is about 70% excess of acute lymphocytic leukemia in the human population.

Is there a Relationship Between Cancer of Cattle and Human Leukemia? *Journal of Health and Healing* 1(1), Winter, 1981

122. Children thrive on a vegetarian diet, and it is compatible with above average mental development.

Johanna T. Dwyer,

Mental Age and I.Q. of Predominantly Vegetarian Children,

Journal of the American Dietetic Assoc. 76:142-147, 2/80

123. Vegetarian women excrete 2-3 times more estrogens in feces than do those who use animal products. This explains part of the reason for the lower incidence of breast cancer in vegetarian women.

Cancer Research 41:3771-3773,
September, 1981

124. The incidence of cancer of the large intestine among women of 23 countries is closely related to the per capita meat consumption.

John Cairns, M.D., *The Cancer Problem*, *Scientific American* 233(5):78, November 1975

125. Drs. Nedra Belloc and Lester Breslow, in their classic work, the Alameda Health Study, identified seven factors strongly correlated with the length of one's life. Two of the seven most important health habits were **those who ate breakfast and**

had nothing to eat between meals.

126. Years ago, Dr. Charles Cupp proposed that weight gain is the result of inappropriate timing of food intake in relation to the evening sleep time. During a medical practice that spanned an amazing seven decades, Cupp instructed hundreds of patients on this approach to weight control. Overweight patients were instructed to change their meal pattern from a heavy meal and snacks in the evening to a heavy morning meal, a moderate lunch, and a light supper. They were to eat their last meal ideally at noon, but by no means after 3PM, and they were instructed not to go to bed until eight and half hours had passed since their last intake of food. Of significance, they were not asked to change their food choices nor the amount of calories they ate. Researchers in the Department of Nutrition at Tulane University's School of Public Health analyzed the records of 595 of Cupp's overweight patients. The results ... **all patients that followed his instructions lost weight!**
127. In a recent study, subjects ate 2,000 calories per day, but all at one meal. When the meal was breakfast, everyone lost weight—about 2.5 pounds per week. When they ate supper, however, 3/4 of the subjects gained weight, while the others lost a little, but not as much as with a breakfast meal.
Vegetarian Times 5/85
128. It's interesting that chronically overweight people often eat more than half their calories during the second half of the day.
USA Weekend, 2/10/89
129. "I've yet to meet an overweight person who doesn't skip breakfast and snack at night."
Pat Harper, RD
American Dietetic Association
130. "Children who take juices, cookies, and candy between meals appear to be more prone to infection than those who do not."
MacNeal, Herbert P. M.D. Valuable Notes on a Hot Subject.
Resident and Staff Physician 27(4):89-92, April, 1981
131. "Those who ate less than three times per day had about half the odds of colon cancer compared to those who ate three to four times per day." This was true even when the total calories taken in were the same. After adjusting for age, gender, family history of colon cancer, coffee intake, weight and total daily energy, researchers found that men in the highest-frequency group -- those eating more than four meals per day -- were at 2.3 times the risk of developing colon cancer compared with those eating less than three meals per day.
Dr. Jeffrey T. Wei, University of North Carolina
Nutrition and Cancer, 2004;50(1):16-22
132. "A little starvation can really do more for the average sick man than can the best of medicines and the best doctors. I do not mean a restricted diet: I mean total abstinence from food . . ."
Mark Twain
My Debut as a Literary Person (1889)
133. "Decreased meal frequency or fasting is associated with physiologic adaptations that improve the animals ability to manage

stress such as reduced free radical activity, a prime actor in the aging process in humans. Lab animals fed in this manner are healthy and less prone to all diseases and live about 30% longer than their controls. Intermittent fasting enhances the ability of the brain to resist aging and restore function following injury. Interestingly, increasing the time interval between meals can have beneficial effects on the brain and overall health of mice that are independent of cumulative calorie intake. Reduced meal frequency also seems to suppress the development of various neurological diseases as Alzheimer's, Parkinson's and Huntington's diseases and stroke."

Dr. Mark Mattson

*National Institute on Aging
Baltimore, Maryland*

134. "We need to eat to live, rather than live to eat."

Numerous

135. "Studies indicate that vegetarians often have lower morbidity and mortality rates. . . . Not only is mortality from coronary artery disease lower in vegetarians than in nonvegetarians, but vegetarian diets have also been successful in arresting coronary artery disease. Scientific data suggest positive relationships between a vegetarian diet and reduced risk for . . . obesity, coronary artery disease, hypertension, diabetes mellitus, and some types of cancer."
American Dietetic Association Position Paper on Vegetarian Diets

136. "Vegetarians have the best diet; they have the lowest rates of coronary heart disease of any group in the country."

William Castelli, M.D., Director,

Framingham Health study,

The longest-running study of diet and heart disease in medical history

137. It's true that a small percentage of patients have a hereditary form of arteriosclerosis in the sense that in their immediate family and their parents' and grandparents' families, there is a high incidence of atherosclerosis and coronary heart disease. . . . But that only constitutes about five percent of the cases. Most people (who develop heart disease) don't really have a hereditary disease."

Michael DeBakey, M.D., Director,

Cardiovascular Research Center, pioneer in heart transplants, bypasses and the artificial heart

138. "Blood pressure fell within hours of starting the (very low-fat vegan diet) McDougall Program. Twenty percent of the people were on blood pressure medications the day they began the program. In almost every case the medications were stopped that day. Yet the blood pressure dropped (significantly) by the second day. This data is from over 1,000 participants at the McDougall Program at St. Helena Hospital in the Napa Valley of California."

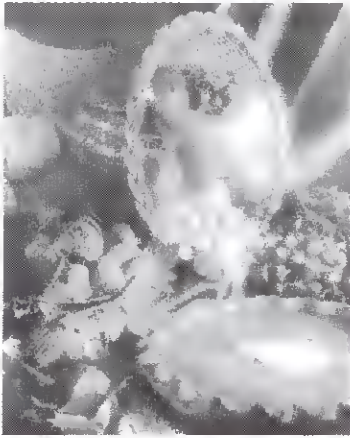
John McDougall, M.D.

139. "A low-fat plant-based diet would not only lower the heart attack rate about 85 percent, but would lower the cancer rate 60 percent."
William Castelli, M.D., Director,
Framingham Health study;
National Heart, Lung, and Blood Institute

140. "High-protein diets impair mental functioning."
International Journal of Obesity Related Metabolic Disorders 19 (1995):811

141. "If you step back and look at the data [on beef and cancer], the optimum amount of red meat you eat should be zero."
Walter Willett, M.D., Chairman of the Nutrition Department, Harvard School of Public Health, and director of a study of 88,000 American nurses that analyzed the link between diet and colon cancer
142. "Five to ten percent of all cancers are caused by inherited genetic mutations. By contrast, 70 to 80 percent have been linked to [diet and other] behavioral factors."
Karen Emmons, M.D., Dana-Farber Cancer Institute, Boston
143. "Among people with insulin resistance, three weeks on a high-complex carbohydrate diet, along with exercise, reduced insulin levels by 30 percent. Additional benefits included a 4 percent decrease in weight, and more than 20 percent reductions in cholesterol and triglycerides, indicating greatly reduced heart disease risk."
Journal of the American Dietetic Association 77 (1980):264
144. "Nothing will benefit human health and increase the chances for survival of life on earth as much as the evolution to a vegetarian diet."
Albert Einstein
145. "I have a feeling that science has transgressed a barrier that should have remained inviolate. ... You cannot recall a new life form. ... It will survive you and your children and your children's children. An irreversible attack on the biosphere is something so unheard of, so unthinkable in previous generations, that I only wish that mine had not been guilty of it."
Erwin Chargaff, Professor Emeritus of Biochemistry, Columbia University
146. "Natural forces within us are the true healers of disease."
Hippocrates, Greek Physician [460-359 B.C.]
147. "To lengthen thy days, lessen thy meals."
Benjamin Franklin, American statesman, scientist, and inventor [1706-1790]
148. "The human body is designed to fast safely. Certain biochemical changes take place, when no food is taken, that enable the body to fuel itself by burning up its fat reserves and conserving its vital tissues."
Joel Fuhrman, M.D., Fasting and Eating For Health, 1995
149. "Thanks be to God, since the time I gave up the use of flesh meat and wine, I have been delivered from all physical ills."
John Wesley, Letter to the Bishop of London, 1747
150. "Men dig their graves with their teeth and die more by those fatal instruments than the weapons of their enemies."
Thomas Moffett, "Health Improvement," 1600
151. "We found no clear evidence that folic acid supplementation provided any health benefits. ... a significant excess of prostate cancers was observed in the folate group...." Further, "a recent randomized trial of folic acid in combination with B vitamins for vascular disease also suggested that treatment with these agents may increase the risk of colon cancer."
Journal of the American Medical Association, June 6, 2007

Pantry Stocking



It's possible to get started on this healthy journey very inexpensively. In fact, a lot of these ingredients you probably already have in your pantry. Items like the lemon juice for the tofu sour cream, onion and garlic powder and oats, but if not – **DON'T GET OVERWHELMED!** Don't frustrate yourself financially or emotionally. This message of health is a step by step process. Millet, flax seed, brown rice and tofu are the ones that might seem the most foreign to you. So let's focus on these six ingredients to get you started, as they will help you to prepare some of the foods for the first week:

OATS – for Overnight Apple Oats recipe

BROWN RICE – for Creamy Rice Cereal recipe

MILLET – for Crock Pot Millet recipe

FLAX SEED – for flax seed gel for egg-replacer in any recipe

DRIED FRUITS – like raisins, dates, etc

MORI-NU TOFU – to make tofu sour cream for potatoes



The items below will round out your new pantry. You can begin to pick them up week by week as needed.

• Grains & Beans:

Whole wheat flour and pastas, whole wheat pastry flour, oats, brown rice, millet, navy beans, pintos, garbanzo, black beans.

• Seeds & Nuts:

Cashews (baby bits), sesame seeds, Sesame Tahini, almonds, shredded coconut, coconut milk, sunflower seeds, walnuts, flax seeds.

• Dried Fruits & Yeasts:

Raisins, figs, nutritional yeast flakes, dates, apricots, dry-active yeast.

• Seasonings & Flavoring:

Oregano, thyme, marjoram, sage, cardamom, coriander, basil, garlic powder, onion powder, vanilla extract (non-alcohol), maple syrup, honey, Braggs Liquid Aminos.

• Miscellaneous:

Crock-pot, rice steamer, seed grinder (use coffee bean grinder), blender, waffle iron.